

**Appendix L.**  
**Conceptual Cost Estimates**







Alternatives Analysis Cost Methodology and Assumptions

The construction costs estimates based on the conceptual design presented in this appendix are order-of magnitude cost comparisons of the different design options and do not represent total costs for the project. The conceptual cost estimates are based on the various vertical options shown in Appendix B and the unit prices from the 2009 Business Plan. The cost for ROW is identified qualitatively (high, medium, or low); estimated ROW needs and costs are being developed for options in the 15% engineering design effort.

Basis of Estimate

These estimates have been prepared based on the following:

- Unit costs from 2009 business plan (2009 dollars)
- Preliminary profiles shown on the 500-scale plans included as Appendix B
- Costs broken down by major Subsections 0-9, and then by sub-subsections as depicted on the 500-scale plans
- Costs have been developed for the following options:
  - Aerial Viaduct
  - Berm (Embankment or MSE – mechanically stabilized earth)
  - At-Grade
  - Open Trench
  - Covered Trench/Tunnel
  - Deep Tunnel
  - Hybrid
- ROW costs identified qualitatively as Low, Medium or High
- System wide elements such as Traction Power, Overhead Contact System, Communications, Signaling assumed to be equal for all options
- Costs for reconfiguration of existing Caltrain stations included
- 4-track fully grade separated shared use system assumed
- Costs for HST stations at Millbrae and San Jose included
- Costs for 4<sup>th</sup> and King HST station not included
- Costs for potential Mid-Peninsula HST station not included
- Maintenance facility not included
- Temporary construction easements (TCE) not included
- Contingency of 25% is included

Definitions/Assumptions

- Aerial Viaduct – Elevated structure on columns crossing over existing streets to provide grade separated access.
- Berm – Earthen elevated berm with slopes conforming back to surrounding grade, or mechanically stabilized earth (MSE) walls. Grade separation accomplished by structures spanning the roadways.
- At-Grade – Grade separations requiring streets to go either over or under tracks that remain at existing Caltrain grade. ROW impacts account for parcels affected by changes to the roadway profile approaching the grade separation.

- Open Trench – Shallow open box bridged at street crossings and drainage channels or streams. These bridged areas would be approximately 10 feet deep in order to accommodate existing utilities.
- Covered Trench/Tunnel – Shallow covered box generally constructed from the surface down. Fire and life safety systems required. Top of the box approximately 10 feet below existing street level to minimize impacts to existing underground utilities.
- Deep Tunnel – Deep tunnel generally constructed by mining or tunnel boring machine (TBM). Large surface areas needed at the tunnel portals to facilitate construction. Fire and life safety systems required. No HST or Caltrain stations. Option only considered for 2 HST tracks, therefore to develop total cost must add cost to reconstruct Caltrain tracks to achieve the required grade separations. Deep tunnel unit cost is based on construction methodology; soil conditions will dictate actual types of construction.
- Hybrid – Hybrid configurations consist of either the 2-track open trench over a 2-track covered box or a 2-track open trench over a deep tunnel. The 2-track open trench over a 2-track covered box is constructed from the surface down. Fire and life safety systems are required. Top of the open trench approximately 10 feet deep in order to accommodate existing utilities.

The use of a vertical option in any given sub-section must be coordinated with the adjacent subsection. Transitions between vertical 4-track solutions require approximately 3,000 feet of horizontal distance; transitions between vertical 2-track stacked solutions require approximately 5,000 feet of horizontal distance; the final selected solution must be one that can be “stitched” together without excessive vertical alignment changes. The cost tables are broken down into subsections for options that cover the predominant portion of the subsection. Costs of transitions between vertical options are included within major option types. It is assumed that 4 tracks will be utilized for the entire corridor; to develop total costs for “split” solutions where HST tracks are at one level and Caltrain tracks are at another level requires adding the costs of the options to total 4 tracks. There are notes to that effect in each of the design options where this is a possibility.

These conceptual-level costs are intended to allow a comparative analysis within each subsection between the numerous vertical options that continue to be studied; a more detailed estimate will be developed with the 15% engineering design.



Subsection 0	OA (2.2 miles)	OB (2.2 miles)	OC (1.0 miles)	OD (2.3 miles)
	Covered Trench/ Tunnel	Covered Trench/Tunnel	At Grade	Covered Trench/ Tunnel
Capital Cost (in Millions) does not include ROW	\$3,000 (\$YOE) (Estimate provided by the TJPA, 2010)	\$3,000 (\$YOE) (Estimate provided by the TJPA, 2010)	\$200 (\$YOE)	\$3,000+ (\$YOE)
Acquisition Cost of Permanent ROW	Medium	Medium	Lowest	Highest
Notes:	1. Inclusive of train box and station (in year of expenditure \$) 2. Includes \$100M for reconstruction of 4th & King. 3. Assumed CHSRA contribution of \$1B from CHSRA 2009 Business Plan.	1. Assumed HST contribution of \$1B towards the total construction costs.	1. Based on MTC SF/Silicon Investment Strategy dated June 2009. 2. Assumed costs to be doubled that of the 2 platform option.	1. Inclusive of train box and station (in year of expenditure \$) 2. Includes \$100M for reconstruction of 4th & King. 3. \$3 billion cost based on TTC estimate for 2.2 mile tunnel and terminal.



Subsection 1	1A (0.3 miles)		1B & 1C (1.0 miles)		1D, 1E, 1F & 1G (3.5 miles)	
	At Grade	Covered Trench/ Tunnel	At Grade	Covered Trench/ Tunnel	At Grade	Covered Trench/ Tunnel
Capital Cost (\$2009 in Millions) does not include ROW	\$44 (2 tracks)	\$70 (2 tracks)	\$21 (2 tracks)	\$271 (2 tracks)	\$ 459 (4 tracks) \$71 (2 tracks)	\$955 (2 tracks)
Acquisition Cost of Permanent ROW	Lowest	Medium	Lowest	Lowest	Highest	Lowest
Notes:	<b>2 tracks -</b> 1. Grade separations at Common St and 16th St; 2. ROW take considers the parcels impacted by new grade separations; 3. Two tracks on existing Caltrain alignment for approach to 4th/King station. <i>Must be combined with 2 track covered trench/tunnel option.</i>	<b>2 tracks -</b> 1. Two tracks on new alignment for approach to TTC; <i>Must be combined with 2 track at grade option.</i> 2. Alignment under 7th St.	<b>2 tracks -</b> 1. Two tracks on existing Caltrain alignment for approach to 4th/King station. <i>Must be combined with 2 track covered trench/tunnel option.</i>	<b>2 tracks -</b> 1. Drilled & blast tunneling method; 2. Two tracks on new alignment for approach to TTC. <i>Must be combined with 2 track at grade option.</i>	<b>4 tracks -</b> 1. Two tracks on existing Caltrain alignment for approach to 4th/King station. 2. Two tracks on new alignment for approach to TTC using combination of tunneling and aerial structures. 3. Caltrain Bayshore Station. <b>2 tracks -</b> 1. Two tracks on existing Caltrain alignment for approach to 4th/King station. <i>Must be combined with 2 track covered trench/tunnel option.</i> 2. Caltrain Bayshore Station.	<b>2 tracks -</b> 1. Drilled & blast tunneling method; 2. Two tracks on new alignment for approach to TTC. <i>Must be combined with 2 track at grade option.</i>



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 tracks)				Covered Trench/Tunnel (2 tracks)			
Subsection 1			Base: 2009 (3rd Quarter)	A				A				
				Start: 200 + 00	End: 215 + 00	0.28 Miles		Start: 200 + 00	End: 215 + 00	0.28 Miles		
Subsection Details					Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)					0.28 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)					0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)					0.00 Miles		Start: 200 + 00	End: 215 + 00	0.28 Miles			
Double Track Trench (Mile)					0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)					0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)					0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)					0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)					0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Section - Total												
1	Double Track Section - At Grade	Mile	\$	2,100,224		0.28	\$	596,655		0.00	\$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160		0.00	\$	-		0.00	\$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160		0.00	\$	-		0.28	\$	1,335,273
4	Double Track Section - In Trench	Mile	\$	4,700,160		0.00	\$	-		0.00	\$	-
Four Track Section - Total												
	Four-track Section - At Grade	Mile	\$	4,200,448		0.00	\$	-		0.00	\$	-
	Four-Track Section - On Structure	Mile	\$	9,400,320		0	\$	-		0	\$	-
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320		0	\$	-		0.00	\$	-
	Four-Track Section - In Trench	Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-
Single Track - Total												
5	Single Track Section - At Grade	Mile	\$	1,549,312		0	\$	-		0	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080		0	\$	-		0	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080		0	\$	-		0	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080		0	\$	-		0	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552		0	\$	-		0	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312		0	\$	-		0	\$	-
Earthwork Items												
1	Site Preparation - Undeveloped	Acre	\$	9,216		3.79	\$	34,909		3.79	\$	34,909
2	Total Cut	CY	\$	6		0.00	\$	-		96800.00	\$	624,476
3	Total Fill	CY	\$	6		0.00	\$	-		38720.00	\$	243,546
4	Borrow	CY	\$	13		0.00	\$	-		0.00	\$	-
5	Spoil	CY	\$	13		0.00	\$	-		58080.00	\$	730,637
6	Landscape erosion Control	Acre	\$	6,144		0.09	\$	553		1.20	\$	7,373
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384		0.00	\$	-			\$	-
8	Special Drainage Facilities	5% Earthwork					\$	1,773			\$	82,047
Structures, Tunnels, Walls												
1	Standard Structure (2 tracks)	Mile	\$	34,972,672		0.00	\$	-		0.00	\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008		0.00	\$	-		0.00	\$	-
2	High Structure	Mile	\$	40,424,448			\$	-			\$	-
3	Long Span Structure	Mile	\$	61,919,232			\$	-			\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208			\$	-			\$	-
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408		0.00	\$	-		0.00	\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$	-			\$	-
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-			\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			\$	-			\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680		0.00	\$	-		0.00	\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000			\$	-			\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-			\$	-
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896			\$	-			\$	-
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$	-			\$	-
12	Crossovers	ea	\$	442,368			\$	-			\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080		0.00	\$	-		0.28	\$	37,285,818
14	Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224		0.00	\$	-		0.00	\$	-
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336								
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904			\$	-			\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856								
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			\$	-		0.28	\$	3,366,109
17	Retaining Walls	Mile	\$	8,613,888		0.00	\$	-		0.00	\$	-
18	Containment Walls	Mile	\$	5,907,456			\$	-			\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080			\$	-			\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360			\$	-			\$	-
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000			\$	-			\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624			\$	-			\$	-
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792			\$	-			\$	-
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160		0.00	\$	-			\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114								
Grade Separations												
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352		2	\$	26,568,704			\$	-
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			\$	-			\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680		0	\$	-			\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	-			\$	-
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520		0	\$	-		0	\$	-
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			\$	-			\$	-



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 tracks)				Covered Trench/Tunnel (2 tracks)					
Subsection 1				Base: 2009 (3rd Quarter)	A				A					
					Start: 200 + 00	End: 215 + 00	0.28 Miles		Start: 200 + 00	End: 215 + 00	0.28 Miles			
Subsection Details							Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)					Start: 200 + 00	End: 215 + 00	0.28 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 200 + 00	End: 215 + 00	0.28 Miles			
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
6	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			0	\$	-			0	\$	-
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-				\$	-
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$	-				\$	-
8	Minor Crossing Closures	ea	\$	87,040				\$	-				\$	-
Building Items														
1	Intermediate Passenger Stations	Each	\$	-				\$	-				\$	-
2	Terminal Passenger Stations	Each	\$	-				\$	-				\$	-
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$	-				\$	-
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-				\$	-
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-				\$	-
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-				\$	-
3	Maintenance Facility	Each	\$	123,921,884				\$	-				\$	-
4	Parking - Structures	space	\$	-				\$	-				\$	-
5	Parking - At Grade	space	\$	-				\$	-				\$	-
Rail & Utility Relocation														
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-				\$	-
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-				\$	-
3	Single Track Removal	Mile	\$	130,048				\$	-				\$	-
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-				\$	-
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-				\$	-
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-				\$	-
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-				\$	-
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-				\$	-
ROW (NOT INCLUDED)														
ROW required for each segment														
1	Dense Urban	Acre	\$	2,786,321				\$	-				\$	-
2	Urban	Acre	\$	1,371,510				\$	-				\$	-
3	Dense Suburban	Acre	\$	908,134				\$	-				\$	-
4	Suburban	Acre	\$	208,418				\$	-				\$	-
5	Undeveloped	Acre	\$	3,642				\$	-				\$	-
ROW required for Temp. Construction Easement														
1	Dense Urban	Acre						\$	-				\$	-
2	Urban	Acre						\$	-				\$	-
3	Dense Suburban	Acre						\$	-				\$	-
4	Suburban	Acre						\$	-				\$	-
5	Undeveloped	Acre						\$	-				\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities														
6	Dense Urban	Acre	\$	2,786,321				\$	-				\$	-
7	Urban	Acre	\$	1,371,510				\$	-				\$	-
8	Dense Suburban	Acre	\$	908,134				\$	-				\$	-
9	Suburban	Acre	\$	208,418				\$	-				\$	-
10	Undeveloped	Acre	\$	3,642				\$	-				\$	-
Environmental Mitigation = 3% Line Costs								\$	816,078				\$	1,311,306
System Elements														
1	Signaling (ATC)	Mile	\$	2,070,000			0.28	\$	588,068			0.28	\$	588,068
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.28	\$	153,409			0.28	\$	153,409
3	Wayside Protection System	Mile	\$	108,000			0.28	\$	30,682			0.28	\$	30,682
Electrification Items														
1	Traction Power supply	Mile	\$	1,170,000			0.28	\$	332,386			0.28	\$	332,386
2	Traction Power Distribution	Mile	\$	1,485,000			0.28	\$	421,875			0.28	\$	421,875
								\$	29,545,092				\$	46,547,914
Program Implementation Costs (per screening)								\$	7,533,998				\$	11,869,718
Program Implementation Costs														
Contingencies (per screening) (25%)								\$	7,386,273				\$	11,636,978
Subtotal								\$	44,465,363				\$	70,054,611
Subtotal Rounded								\$	44,000,000				\$	70,000,000



COST ELEMENTS		UNIT	UNIT PRICE	At-Grade			Tunnel (2 tracks - Mined)			
Subsection 1			Base: 2009 (3rd Quarter)	B			B			
				Start: 215 + 00	End: 255 + 00	0.76 Miles	Start: 215 + 00	End: 255 + 00	0.76 Miles	
Subsection Details						Quant.			Quant.	Cost
Double Track At-Grade (Mile)				Start: 215 + 00	End: 255 + 00	0.76 Miles	Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles	Start: 215 + 00	End: 255 + 00	0.76 Miles	
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles	Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles	Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles	Start: 0 + 00		0.00 Miles	
Double Track Section - Total										
1 Double Track Section - At Grade	Mile	\$	2,100,224			0.76			0.00	\$ -
2 Double Track Section - On Structure	Mile	\$	4,700,160			0.00			0.00	\$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00			0.76	\$ 3,560,727
4 Double Track Section - In Trench	Mile	\$	4,700,160			0.00			0.00	\$ -
Four Track Section - Total										
Four-track Section - At Grade	Mile	\$	4,200,448			0.00			0.00	\$ -
Four-Track Section - On Structure	Mile	\$	9,400,320			0			0.00	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0			0.00	\$ -
Four-Track Section - In Trench	Mile	\$	9,400,320			0.00			0.00	\$ -
Single Track - Total										
5 Single Track Section - At Grade	Mile	\$	1,549,312			0			0.00	\$ -
6 Single Track Section - On structure	Mile	\$	2,350,080			0			0.00	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0			0.00	\$ -
8 Single Track Section - In Trench	Mile	\$	2,350,080			0			0.00	\$ -
9 Freight Double Track - At Grade	Mile	\$	2,839,552			0			0.00	\$ -
10 Freight Single Track - At Grade	Mile	\$	1,549,312			0			0.00	\$ -
Earthwork Items										
1 Site Preparation - Undeveloped	Acre	\$	9,216			10.10			10.10	\$ 93,091
2 Total Cut	CY	\$	6			0.00			652666.00	\$ 4,210,479
3 Total Fill	CY	\$	6			261066.00			261066.00	\$ 1,642,084
4 Borrow	CY	\$	13			261066.00			0.00	\$ -
5 Spoil	CY	\$	13			0.00			391600.00	\$ 4,926,265
6 Landscape erosion Control	Acre	\$	6,144			0.09			8.09	\$ 49,705
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.76			0.00	\$ -
8 Special Drainage Facilities	5% Earthwork									\$ 546,081
Structures, Tunnels, Walls										
1 Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00			0.00	\$ -
Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00			0.00	\$ -
2 High Structure	Mile	\$	40,424,448							\$ -
3 Long Span Structure	Mile	\$	61,919,232							\$ -
4 Waterway Crossing - Primary	Mile	\$	85,342,208							\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.00				\$ -
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264						0.76	\$ 108,129,745
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312							\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896							\$ -
9 Double Track Drill & Blast	Mile	\$	146,887,680			0.00				\$ -
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000							\$ -
Double Track TBM (<6 Miles)	Mile	\$	106,637,312							\$ -
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896							\$ -
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952							\$ -
12 Crossovers	ea	\$	442,368							\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00			0.00	\$ -
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224			0.00				\$ -
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336							
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904							\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856							
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704						0.76	\$ 8,976,291
17 Retaining Walls	Mile	\$	8,613,888			0.00				\$ -
18 Containment Walls	Mile	\$	5,907,456							\$ -
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080							\$ -
Four Track Drill & Blast	Mile	\$	293,775,360							\$ -
Four Track Mined (Soft Soil)	Mile	\$	158,400,000							\$ -
Four Track TBM (<6 Miles)	Mile	\$	213,274,624							\$ -
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792							\$ -
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00				\$ -
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114							
Grade Separations										
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352							\$ -
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528							\$ -
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680							\$ -
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568							\$ -
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			0				\$ -
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216							\$ -



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade			Tunnel (2 tracks - Mined)							
Subsection 1				Base: 2009 (3rd Quarter)	B			B							
					Start: 215 + 00	End: 255 + 00	0.76 Miles	Start: 215 + 00	End: 255 + 00	0.76 Miles					
Subsection Details						Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)					Start: 215 + 00	End: 255 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 215 + 00	End: 255 + 00	0.76 Miles				
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
6	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			0	\$	-			\$	-		
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-			\$	-		
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$	-			\$	-		
8	Minor Crossing Closures	ea	\$	87,040				\$	-			\$	-		
Building Items															
1	Intermediate Passenger Stations	Each	\$	-				\$	-			\$	-		
2 Terminal Passenger Stations															
	Caltrain Passenger Station - At-Grade	Each	\$	-				\$	-			\$	-		
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-			\$	-		
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-			\$	-		
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-			\$	-		
3	Maintenance Facility	Each	\$	123,921,884				\$	-			\$	-		
4	Parking - Structures	space	\$	-				\$	-			\$	-		
5	Parking - At Grade	space	\$	-				\$	-			\$	-		
Rail & Utility Relocation															
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-			\$	-		
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-			\$	-		
3 Single Track Removal															
4	Major Utility Relocations - Dense Urban	Mile	\$	130,048				\$	-			\$	-		
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-			\$	-		
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-			\$	-		
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-			\$	-		
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-			\$	-		
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-			\$	-		
ROW (NOT INCLUDED)															
ROW required for each segment															
1	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-		
2	Urban	Acre	\$	1,371,510				\$	-			\$	-		
3	Dense Suburban	Acre	\$	908,134				\$	-			\$	-		
4	Suburban	Acre	\$	208,418				\$	-			\$	-		
5	Undeveloped	Acre	\$	3,642				\$	-			\$	-		
ROW required for Temp. Construction Easement															
1	Dense Urban	Acre						\$	-			\$	-		
2	Urban	Acre						\$	-			\$	-		
3	Dense Suburban	Acre						\$	-			\$	-		
4	Suburban	Acre						\$	-			\$	-		
5	Undeveloped	Acre						\$	-			\$	-		
Right-of-Way Required for Stations, Maintenance & Parking Facilities															
6	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-		
7	Urban	Acre	\$	1,371,510				\$	-			\$	-		
8	Dense Suburban	Acre	\$	908,134				\$	-			\$	-		
9	Suburban	Acre	\$	208,418				\$	-			\$	-		
10	Undeveloped	Acre	\$	3,642				\$	-			\$	-		
Environmental Mitigation = 3% Line Costs								\$	209,305			\$	3,964,034		
System Elements															
1	Signaling (ATC)	Mile	\$	2,070,000			0.76	\$	1,568,182		0.76	\$	1,568,182		
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.76	\$	409,091		0.76	\$	409,091		
3	Wayside Protection System	Mile	\$	108,000			0.76	\$	81,818		0.76	\$	81,818		
Electrification Items															
1	Traction Power supply	Mile	\$	1,170,000			0.76	\$	886,364		0.76	\$	886,364		
2	Traction Power Distribution	Mile	\$	1,485,000			0.76	\$	1,125,000		0.76	\$	1,125,000		
Subtotal								\$	11,256,580			\$	140,168,958		
Program Implementation Costs (per screening)								\$	2,870,428			\$	35,743,084		
Program Implementation Costs															
Contingencies (per screening) (25%)								\$	2,814,145			\$	35,042,239		
Subtotal								\$	16,941,153				\$	210,954,282	
Subtotal (Rounded)								\$			17,000,000	\$			211,000,000



COST ELEMENTS				UNIT	UNIT PRICE	At-Grade			Tunnel (2 tracks - Mined)						
Subsection 1					Base: 2009 (3rd Quarter)	C			C						
						Start: 255 + 00	End: 267 + 00	0.23 Miles	Start: 255 + 00	End: 267 + 00	0.23 Miles				
Subsection Details							Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)						Start: 255 + 00	End: 267 + 00	0.23 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 255 + 00	End: 267 + 00	0.23 Miles			
Double Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Section - Total															
1	Double Track Section - At Grade	Mile	\$	2,100,224				0.23	\$	477,324			0.00	\$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160				0.00	\$	-			0.00	\$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				0.00	\$	-			0.23	\$	1,068,218
4	Double Track Section - In Trench	Mile	\$	4,700,160				0.00	\$	-			0.00	\$	-
Four Track Section - Total															
	Four-track Section - At Grade	Mile	\$	4,200,448				0.00	\$	-			0.00	\$	-
	Four-Track Section - On Structure	Mile	\$	9,400,320				0	\$	-			0.00	\$	-
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0	\$	-			0.00	\$	-
	Four-Track Section - In Trench	Mile	\$	9,400,320				0.00	\$	-			0.00	\$	-
Single Track - Total															
5	Single Track Section - At Grade	Mile	\$	1,549,312				0	\$	-			0.00	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080				0	\$	-			0.00	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0	\$	-			0.00	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080				0	\$	-			0.00	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552				0	\$	-			0.00	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312				0	\$	-			0.00	\$	-
Earthwork Items															
1	Site Preparation - Undeveloped	Acre	\$	9,216				3.03	\$	27,927			3.03	\$	27,927
2	Total Cut	CY	\$	6				0.00	\$	-			84333.00	\$	544,049
3	Total Fill	CY	\$	6				33733.00	\$	212,178			33733.00	\$	212,178
4	Borrow	CY	\$	13				33733.00	\$	424,356			0.00	\$	-
5	Spoil	CY	\$	13				0.00	\$	-			50600.00	\$	636,540
6	Landscape erosion Control	Acre	\$	6,144				0.09	\$	553			1.05	\$	6,451
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.23	\$	32,815			0.00	\$	-
8	Special Drainage Facilities	5% Earthwork							\$	34,891				\$	71,357
Structures, Tunnels, Walls															
1	Standard Structure (2 tracks)	Mile	\$	34,972,672				0.00	\$	-			0.00	\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008				0.00	\$	-			0.00	\$	-
2	High Structure	Mile	\$	40,424,448					\$	-				\$	-
3	Long Span Structure	Mile	\$	61,919,232					\$	-				\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208					\$	-				\$	-
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				0.00	\$	-				\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264					\$	-			0.23	\$	32,438,924
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312					\$	-				\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896					\$	-				\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680				0.00	\$	-				\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000					\$	-				\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312					\$	-					
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896					\$	-					
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952					\$	-				\$	-
12	Crossovers	ea	\$	442,368					\$	-				\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				0.00	\$	-			0.00	\$	-
14	Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224				0.00	\$	-				\$	-
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336											
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904					\$	-				\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856											
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704					\$	-			0.23	\$	2,692,887
17	Retaining Walls	Mile	\$	8,613,888				0.00	\$	-				\$	-
18	Containment Walls	Mile	\$	5,907,456					\$	-				\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080					\$	-				\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360					\$	-				\$	-
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000					\$	-					
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624					\$	-					
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792					\$	-					
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00	\$	-				\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114											
Grade Separations															
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352					\$	-				\$	-
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528					\$	-				\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680					\$	-				\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568					\$	-				\$	-
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				0	\$	-				\$	-
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216					\$	-				\$	-



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade			Tunnel (2 tracks - Mined)					
Subsection 1				Base: 2009 (3rd Quarter)	C			C					
					Start: 255 + 00	End: 267 + 00	0.23 Miles		Start: 255 + 00	End: 267 + 00	0.23 Miles		
Subsection Details							Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)					Start: 255 + 00	End: 267 + 00	0.23 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 255 + 00	End: 267 + 00	0.23 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
6	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			0	\$	-			\$	-
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-			\$	-
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$	-			\$	-
8	Minor Crossing Closures	ea	\$	87,040				\$	-			\$	-
Building Items													
1	Intermediate Passenger Stations	Each	\$	-				\$	-			\$	-
2	Terminal Passenger Stations	Each	\$	-				\$	-			\$	-
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$	-			\$	-
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-			\$	-
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-			\$	-
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-			\$	-
3	Maintenance Facility	Each	\$	123,921,884				\$	-			\$	-
4	Parking - Structures	space	\$	-				\$	-			\$	-
5	Parking - At Grade	space	\$	-				\$	-			\$	-
Rail & Utility Relocation													
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-			\$	-
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-			\$	-
3	Single Track Removal	Mile	\$	130,048				\$	-			\$	-
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-			\$	-
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-			\$	-
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-			\$	-
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-			\$	-
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-			\$	-
ROW (NOT INCLUDED)													
ROW required for each segment													
1	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-
2	Urban	Acre	\$	1,371,510				\$	-			\$	-
3	Dense Suburban	Acre	\$	908,134				\$	-			\$	-
4	Suburban	Acre	\$	208,418				\$	-			\$	-
5	Undeveloped	Acre	\$	3,642				\$	-			\$	-
ROW required for Temp. Construction Easement													
1	Dense Urban	Acre						\$	-			\$	-
2	Urban	Acre						\$	-			\$	-
3	Dense Suburban	Acre						\$	-			\$	-
4	Suburban	Acre						\$	-			\$	-
5	Undeveloped	Acre						\$	-			\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities													
6	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-
7	Urban	Acre	\$	1,371,510				\$	-			\$	-
8	Dense Suburban	Acre	\$	908,134				\$	-			\$	-
9	Suburban	Acre	\$	208,418				\$	-			\$	-
10	Undeveloped	Acre	\$	3,642				\$	-			\$	-
Environmental Mitigation = 3% Line Costs								\$	36,301				\$ 1,130,956
System Elements													
1	Signaling (ATC)	Mile	\$	2,070,000			0.23	\$	470,455			0.23	\$ 470,455
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.23	\$	122,727			0.23	\$ 122,727
3	Wayside Protection System	Mile	\$	108,000			0.23	\$	24,545			0.23	\$ 24,545
Electrification Items													
1	Traction Power supply	Mile	\$	1,170,000			0.23	\$	265,909			0.23	\$ 265,909
2	Traction Power Distribution	Mile	\$	1,485,000			0.23	\$	337,500			0.23	\$ 337,500
								\$	2,467,481			\$	40,050,624
Program Implementation Costs (per screening)								\$	629,208			\$	10,212,909
Program Implementation Costs													
Contingencies (per screening) (25%)								\$	616,870			\$	10,012,656
Subtotal								\$	3,713,559			\$	60,276,189
Subtotal (Rounded)								\$	4,000,000			\$	60,000,000



COST ELEMENTS				UNIT	UNIT PRICE	At-Grade (2 Tracks)				At-Grade (4 Tracks)				Tunnel (2 tracks - Mined)			
Subsection 1					Base: 2009 (3rd Quarter)	D				D				D			
						Start: 267 + 00	End: 315 + 00	0.91 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles	
Subsection Details								Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)						Start: 267 + 00	End: 315 + 00	0.91 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles		Start: 0 + 00		0.00 Miles	
Double Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles	
Double Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total																	
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.91	\$ 1,909,295			0.91	\$ 1,909,295			0.00	\$ -	
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$ -			0.91	\$ 4,272,873			0.00	\$ -	
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.91	\$ 4,272,873	
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -	
Four Track Section - Total																	
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$ -			0.00	\$ -			0.00	\$ -	
	Four-Track Section - On Structure	Mile	\$	9,400,320			0	\$ -			0.00	\$ -			0	\$ -	
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0	\$ -			0	\$ -			0	\$ -	
	Four-Track Section - In Trench	Mile	\$	9,400,320			0	\$ -			0	\$ -			0	\$ -	
Single Track - Total																	
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -	
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -	
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -	
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -	
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$ -			0	\$ -			0	\$ -	
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -	
Earthwork Items																	
1	Site Preparation - Undeveloped	Acre	\$	9,216			12.12	\$ 111,709			12.12	\$ 111,709			0.00	\$ -	
2	Total Cut	CY	\$	6			0.00	\$ -			0.00	\$ -			916667.00	\$ 5,913,602	
3	Total Fill	CY	\$	6			0.00	\$ -			0.00	\$ -			366667.00	\$ 2,306,306	
4	Borrow	CY	\$	13			0.00	\$ -			0.00	\$ -			0.00	\$ -	
5	Spoil	CY	\$	13			0.00	\$ -			0.00	\$ -			550000.00	\$ 6,918,912	
6	Landscape erosion Control	Acre	\$	6,144			0.85	\$ 5,222			0.85	\$ 5,222			0.00	\$ -	
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$ -			0.00	\$ -			0.85	\$ 122,726	
8	Special Drainage Facilities	5% Earthwork						\$ 5,847				\$ 5,847				\$ 763,077	
Structures, Tunnels, Walls																	
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$ -			0.91	\$ 31,793,338			0.00	\$ -	
	Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00	\$ -			0.00	\$ -			0.00	\$ -	
2	High Structure	Mile	\$	40,424,448				\$ -				\$ -				\$ -	
3	Long Span Structure	Mile	\$	61,919,232				\$ -				\$ -				\$ -	
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$ -				\$ -				\$ -	
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$ -				\$ -				\$ -	
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$ -				\$ -			0.91	\$ 129,755,695	
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$ -				\$ -				\$ -	
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$ -				\$ -				\$ -	
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$ -			0.00	\$ -				\$ -	
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$ -				\$ -			0.00	\$ -	
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312											0.00	\$ -	
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896													
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$ -				\$ -				\$ -	
12	Crossovers	ea	\$	442,368				\$ -				\$ -				\$ -	
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$ -			0.00	\$ -				\$ -	
14	Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224			0.00	\$ -			0.00	\$ -				\$ -	
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336													
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$ -				\$ -				\$ -	
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856													
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				\$ -				\$ -			0.91	\$ 10,771,549	
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$ -			0.00	\$ -				\$ -	
18	Containment Walls	Mile	\$	5,907,456				\$ -				\$ -				\$ -	
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$ -				\$ -				\$ -	
	Four Track Drill & Blast	Mile	\$	293,775,360				\$ -				\$ -				\$ -	
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$ -				\$ -				\$ -	
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624												\$ -	
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792												\$ -	
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$ -			0.00	\$ -			0.00	\$ -	
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114													
Grade Separations																	
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$ -				\$ -				\$ -	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$ -				\$ -				\$ -	
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$ -				\$ -				\$ -	
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$ -				\$ -				\$ -	
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			0	\$ -			0	\$ -				\$ -	



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 Tracks)				At-Grade (4 Tracks)				Tunnel (2 tracks - Mined)					
Subsection 1			Base: 2009 (3rd Quarter)	D				D				D						
				Start: 267 + 00	End: 315 + 00	0.91 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles				
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)				Start: 267 + 00	End: 315 + 00	0.91 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles		Start: 0 + 00		0.00 Miles				
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles		Start: 0 + 00		0.00 Miles				
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 267 + 00	End: 315 + 00	0.91 Miles				
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			\$	-			\$	-			\$	-		
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			\$	-			\$	-			\$	-		
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328			\$	-			\$	-			\$	-		
7	Street Bridging HSR Trench	ea	\$	1,398,784			\$	-			\$	-		0	\$	-		
8	Minor Crossing Closures	ea	\$	87,040			\$	-			\$	-		0	\$	-		
Building Items																		
1	Intermediate Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-		
2	Terminal Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-		
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000			\$	-			\$	-			\$	-		
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000			\$	-			\$	-			\$	-		
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000			\$	-			\$	-			\$	-		
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000			\$	-			\$	-			\$	-		
3	Maintenance Facility	Each	\$	123,921,884			\$	-			\$	-			\$	-		
4	Parking - Structures	space	\$	-			\$	-			\$	-			\$	-		
5	Parking - At Grade	space	\$	-			\$	-			\$	-			\$	-		
Rail & Utility Relocation																		
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896			\$	-			\$	-			\$	-		
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896			\$	-			\$	-			\$	-		
3	Single Track Removal	Mile	\$	130,048			\$	-			\$	-			\$	-		
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288			\$	-			\$	-			\$	-		
5	Major Utility Relocations - Urban	Mile	\$	1,084,416			\$	-			\$	-			\$	-		
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168			\$	-			\$	-			\$	-		
7	Major Utility Relocations - Suburban	Mile	\$	464,896			\$	-			\$	-			\$	-		
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720			\$	-			\$	-			\$	-		
ROW (NOT INCLUDED)																		
ROW required for each segment																		
1	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-		
2	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-		
3	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-		
4	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-		
5	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-		
	ROW required for Temp. Construction Easement	Acre																
1	Dense Urban	Acre					\$	-			\$	-			\$	-		
2	Urban	Acre					\$	-			\$	-			\$	-		
3	Dense Suburban	Acre					\$	-			\$	-			\$	-		
4	Suburban	Acre					\$	-			\$	-			\$	-		
5	Undeveloped	Acre					\$	-			\$	-			\$	-		
	Right-of-Way Required for Stations, Maintenance & Parking Facilities																	
6	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-		
7	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-		
8	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-		
9	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-		
10	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-		
	Environmental Mitigation = 3% Line Costs						\$	60,962			\$	1,142,949			\$	4,824,742		
System Elements																		
1	Signaling (ATC)	Mile	\$	2,070,000			0.91	\$	1,881,818			0.91	\$		0.91	\$	1,881,818	
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.91	\$	490,909			0.91	\$		0.91	\$	490,909	
3	Wayside Protection System	Mile	\$	108,000			0.91	\$	98,182			0.91	\$		0.91	\$	98,182	
Electrification Items																		
1	Traction Power supply	Mile	\$	1,170,000			0.91	\$	1,063,636			0.91	\$		0.91	\$	1,063,636	
2	Traction Power Distribution	Mile	\$	1,485,000			0.91	\$	1,350,000			0.91	\$		0.91	\$	1,350,000	
							\$	6,977,580			\$	44,125,777			\$	170,534,028		
Program Implementation Costs (per screening)								\$	1,779,283					\$	11,252,073	\$		43,486,177
Program Implementation Costs																		
Contingencies (per screening) (25%)								\$	1,744,395					\$	11,031,444	\$		42,633,507
Subtotal								\$	10,501,258					\$	66,409,295	\$		256,653,712
Subtotal (Rounded)								\$	11,000,000					\$	66,000,000	\$		257,000,000



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 Tracks)				At-Grade (4 Tracks)				Tunnel (2 tracks - Mined)					
Subsection 1			Base: 2009 (3rd Quarter)	E				E				E						
				Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 315 + 00	Start: 350 + 00	0.66 Miles				
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)				Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 315 + 00	End: 350 + 00	0.66 Miles				
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Double Track Section - Total																		
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.66	\$	1,392,194			0.66	\$	1,392,194		0.00	\$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-		0.00	\$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	-			0.66	\$	3,115,636		0.66	\$	3,115,636
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-		0.00	\$	-
Four Track Section - Total																		
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-			0.00	\$	-		0.00	\$	-
	Four-Track Section - On Structure	Mile	\$	9,400,320			0	\$	-			0	\$	-		0	\$	-
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0	\$	-			0	\$	-		0	\$	-
	Four-Track Section - In Trench	Mile	\$	9,400,320			0	\$	-			0	\$	-		0	\$	-
Single Track - Total																		
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-		0	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-			0	\$	-		0	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-			0	\$	-		0	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			0	\$	-		0	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-			0	\$	-		0	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-		0	\$	-
Earthwork Items																		
1	Site Preparation - Undeveloped	Acre	\$	9,216			8.84	\$	81,469			8.84	\$	81,469		8.84	\$	81,469
2	Total Cut	CY	\$	6			0.00	\$	-			0.00	\$	-		231815.00	\$	1,495,485
3	Total Fill	CY	\$	6			0.00	\$	-			0.00	\$	-		92726.00	\$	583,239
4	Borrow	CY	\$	13			0.00	\$	-			0.00	\$	-		0.00	\$	-
5	Spoil	CY	\$	13			0.00	\$	-			0.00	\$	-		139089.00	\$	1,749,717
6	Landscape erosion Control	Acre	\$	6,144			0.66	\$	4,055			0.66	\$	4,055		2.87	\$	17,633
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-			0.00	\$	-		0.22	\$	31,764
8	Special Drainage Facilities	5% Earthwork						\$	4,276				\$	4,276			\$	197,965
Structures, Tunnels, Walls																		
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$	-			0.00	\$	-		0.00	\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00	\$	-			0.00	\$	-		0.00	\$	-
2	High Structure	Mile	\$	40,424,448				\$	-				\$	-			\$	-
3	Long Span Structure	Mile	\$	61,919,232				\$	-				\$	-			\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-				\$	-			\$	-
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$	-				\$	-			\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-				\$	-		0.66	\$	94,613,527
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-			\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-				\$	-			\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$	-			0.66	\$	97,368,727			\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-				\$	-			\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312														
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896														
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-				\$	-			\$	-
12	Crossovers	ea	\$	442,368				\$	-				\$	-			\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$	-			0.00	\$	-		0.00	\$	-
14	Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224			0.00	\$	-			0.00	\$	-			\$	-
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336														
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-				\$	-			\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856														
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				\$	-				\$	-		0.66	\$	7,854,255
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$	-			0.00	\$	-			\$	-
18	Containment Walls	Mile	\$	5,907,456				\$	-				\$	-			\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-				\$	-			\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-				\$	-			\$	-
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-				\$	-			\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624												0.00	\$	-
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792													\$	-
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			0.00	\$	-			\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114														
Grade Separations																		
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-				\$	-			\$	-
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$	-				\$	-			\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	-				\$	-			\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-				\$	-			\$	-
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			0	\$	-			0	\$	-			\$	-



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 Tracks)				At-Grade (4 Tracks)				Tunnel (2 tracks - Mined)					
Subsection 1			Base: 2009 (3rd Quarter)		E				E				E					
					Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 315 + 00	Start: 350 + 00	0.66 Miles			
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)					Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 315 + 00	End: 350 + 00	0.66 Miles		Start: 315 + 00	End: 350 + 00	0.66 Miles			
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-			\$	-			\$	-	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$	-			\$	-			\$	-	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-			\$	-			\$	-	
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$	-			\$	-		0	\$	-	
8	Minor Crossing Closures	ea	\$	87,040				\$	-			\$	-		0	\$	-	
Building Items																		
1	Intermediate Passenger Stations	Each	\$	-				\$	-			\$	-			\$	-	
2	Terminal Passenger Stations	Each	\$	-				\$	-			\$	-			\$	-	
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$	-			\$	-			\$	-	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-			\$	-			\$	-	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-			\$	-			\$	-	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-			\$	-			\$	-	
3	Maintenance Facility	Each	\$	123,921,884				\$	-			\$	-			\$	-	
4	Parking - Structures	space	\$	-				\$	-			\$	-			\$	-	
5	Parking - At Grade	space	\$	-				\$	-			\$	-			\$	-	
Rail & Utility Relocation																		
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-			\$	-			\$	-	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-			\$	-			\$	-	
3	Single Track Removal	Mile	\$	130,048				\$	-			\$	-			\$	-	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-			\$	-			\$	-	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-			\$	-			\$	-	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-			\$	-			\$	-	
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-			\$	-			\$	-	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-			\$	-			\$	-	
ROW (NOT INCLUDED)																		
ROW required for each segment																		
1	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-			\$	-	
2	Urban	Acre	\$	1,371,510				\$	-			\$	-			\$	-	
3	Dense Suburban	Acre	\$	908,134				\$	-			\$	-			\$	-	
4	Suburban	Acre	\$	208,418				\$	-			\$	-			\$	-	
5	Undeveloped	Acre	\$	3,642				\$	-			\$	-			\$	-	
ROW required for Temp. Construction Easement																		
1	Dense Urban	Acre						\$	-			\$	-			\$	-	
2	Urban	Acre						\$	-			\$	-			\$	-	
3	Dense Suburban	Acre						\$	-			\$	-			\$	-	
4	Suburban	Acre						\$	-			\$	-			\$	-	
5	Undeveloped	Acre						\$	-			\$	-			\$	-	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																		
6	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-			\$	-	
7	Urban	Acre	\$	1,371,510				\$	-			\$	-			\$	-	
8	Dense Suburban	Acre	\$	908,134				\$	-			\$	-			\$	-	
9	Suburban	Acre	\$	208,418				\$	-			\$	-			\$	-	
10	Undeveloped	Acre	\$	3,642				\$	-			\$	-			\$	-	
	Environmental Mitigation = 3% Line Costs							\$	44,460			\$	3,058,991			\$	3,292,221	
System Elements																		
1	Signaling (ATC)	Mile	\$	2,070,000			0.66	\$	1,372,159			0.66	\$	1,372,159		0.66	\$	1,372,159
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.66	\$	357,955			0.66	\$	357,955		0.66	\$	357,955
3	Wayside Protection System	Mile	\$	108,000			0.66	\$	71,591			0.66	\$	71,591		0.66	\$	71,591
Electrification Items																		
1	Traction Power supply	Mile	\$	1,170,000			0.66	\$	775,568			0.66	\$	775,568		0.66	\$	775,568
2	Traction Power Distribution	Mile	\$	1,485,000			0.66	\$	984,375			0.66	\$	984,375		0.66	\$	984,375
								\$	5,088,102			\$	108,586,997			\$	116,594,561	
	Program Implementation Costs (per screening)							\$	1,297,466			\$	27,689,684			\$	29,731,613	
	Program Implementation Costs																	
	Contingencies (per screening) (25%)							\$	1,272,026			\$	27,146,749			\$	29,148,640	
Subtotal								\$	7,657,594					\$	163,423,430			
Subtotal (Rounded)								\$	8,000,000					\$	163,000,000			



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 Tracks)				At-Grade (4 Tracks)				Tunnel (2 tracks - Mined)			
Subsection 1			Base: 2009 (3rd Quarter)		F				F				F			
					Start: 350 + 00	End: 376 + 00	0.49 Miles		Start: 350 + 00	End: 376 + 00	0.49 Miles		Start: 350 + 00	Start: 376 + 00	0.49 Miles	
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)			Start: 350 + 00	End: 376 + 00	0.49 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 350 + 00	End: 376 + 00	0.49 Miles			
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 350 + 00	End: 376 + 00	0.49 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Section - Total																
1 Double Track Section - At Grade	Mile	\$	2,100,224		0.49	\$	1,034,201			0.00	\$	-		0.00	\$	-
2 Double Track Section - On Structure	Mile	\$	4,700,160		0.00	\$	-			0.00	\$	-		0.00	\$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160		0.00	\$	-			0.00	\$	-		0.49	\$	2,314,473
4 Double Track Section - In Trench	Mile	\$	4,700,160		0.00	\$	-			0.00	\$	-		0.00	\$	-
Four Track Section - Total																
Four-track Section - At Grade	Mile	\$	4,200,448		0.00	\$	-			0.49	\$	2,068,402		0.00	\$	-
Four-Track Section - On Structure	Mile	\$	9,400,320		0	\$	-			0	\$	-		0	\$	-
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320		0	\$	-			0	\$	-		0	\$	-
Four-Track Section - In Trench	Mile	\$	9,400,320		0	\$	-			0	\$	-		0	\$	-
Single Track - Total																
5 Single Track Section - At Grade	Mile	\$	1,549,312		0	\$	-			0	\$	-		0	\$	-
6 Single Track Section - On structure	Mile	\$	2,350,080		0	\$	-			0	\$	-		0	\$	-
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080		0	\$	-			0	\$	-		0	\$	-
8 Single Track Section - In Trench	Mile	\$	2,350,080		0	\$	-			0	\$	-		0	\$	-
9 Freight Double Track - At Grade	Mile	\$	2,839,552		0	\$	-			0	\$	-		0	\$	-
10 Freight Single Track - At Grade	Mile	\$	1,549,312		0	\$	-			0	\$	-		0	\$	-
Earthwork Items																
1 Site Preparation - Undeveloped	Acre	\$	9,216		6.57	\$	60,549			6.57	\$	60,549		6.57	\$	60,549
2 Total Cut	CY	\$	6		0.00	\$	-			0.00	\$	-		529629.00	\$	3,416,743
3 Total Fill	CY	\$	6		0.00	\$	-			0.00	\$	-		211851.00	\$	1,332,526
4 Borrow	CY	\$	13		0.00	\$	-			0.00	\$	-		0.00	\$	-
5 Spoil	CY	\$	13		0.00	\$	-			0.00	\$	-		317778.00	\$	3,997,596
6 Landscape erosion Control	Acre	\$	6,144		0.49	\$	3,011			0.49	\$	3,011		6.57	\$	40,366
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384		0.00	\$	-			0.49	\$	71,098		0.49	\$	70,748
8 Special Drainage Facilities	5% Earthwork					\$	3,178				\$	6,733			\$	445,926
Structures, Tunnels, Walls																
1 Standard Structure (2 tracks)	Mile	\$	34,972,672		0.00	\$	-			0.00	\$	-		0.00	\$	-
Standard Structure (4 tracks)	Mile	\$	52,459,008		0.00	\$	-			0.00	\$	-		0.00	\$	-
2 High Structure	Mile	\$	40,424,448			\$	-				\$	-			\$	-
3 Long Span Structure	Mile	\$	61,919,232			\$	-				\$	-			\$	-
4 Waterway Crossing - Primary	Mile	\$	85,342,208			\$	-				\$	-			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			\$	-				\$	-			\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$	-				\$	-		0.49	\$	70,284,335
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-				\$	-			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			\$	-				\$	-			\$	-
9 Double Track Drill & Blast	Mile	\$	146,887,680		0.00	\$	-			0.00	\$	-			\$	-
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000			\$	-				\$	-			\$	-
Double Track TBM (<6 Miles)	Mile	\$	106,637,312													
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896													
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$	-				\$	-			\$	-
12 Crossovers	ea	\$	442,368			\$	-				\$	-			\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080		0.00	\$	-			0.00	\$	-		0.00	\$	-
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224		0.00	\$	-			0.00	\$	-			\$	-
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336													
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904			\$	-				\$	-			\$	-
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856													
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			\$	-				\$	-		0.49	\$	5,834,589
17 Retaining Walls	Mile	\$	8,613,888		0.00	\$	-			0.00	\$	-			\$	-
18 Containment Walls	Mile	\$	5,907,456			\$	-				\$	-			\$	-
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080			\$	-				\$	-			\$	-
Four Track Drill & Blast	Mile	\$	293,775,360			\$	-				\$	-			\$	-
Four Track Mined (Soft Soil)	Mile	\$	158,400,000			\$	-				\$	-			\$	-
Four Track TBM (<6 Miles)	Mile	\$	213,274,624											0.00	\$	-
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792												\$	-
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160		0.00	\$	-			0.00	\$	-			\$	-
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114													
Grade Separations																
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352			\$	-				\$	-			\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			\$	-				\$	-			\$	-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			\$	-				\$	-			\$	-
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	-				\$	-			\$	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520		0	\$	-			0	\$	-			\$	-



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 Tracks)			At-Grade (4 Tracks)				Tunnel (2 tracks - Mined)				
Subsection 1			Base: 2009 (3rd Quarter)	F			F				F					
				Start: 350 + 00	End: 376 + 00	0.49 Miles	Start: 350 + 00	End: 376 + 00	0.49 Miles	Start: 350 + 00	Start: 376 + 00	0.49 Miles				
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)				Start: 350 + 00	End: 376 + 00	0.49 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 350 + 00	End: 376 + 00	0.49 Miles		
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 350 + 00	End: 376 + 00	0.49 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			\$	-			\$	-			\$	-
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			\$	-			\$	-			\$	-
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328			\$	-			\$	-			\$	-
7	Street Bridging HSR Trench	ea	\$	1,398,784			\$	-			\$	-		0	\$	-
8	Minor Crossing Closures	ea	\$	87,040			\$	-			\$	-		0	\$	-
Building Items																
1	Intermediate Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-
2	Terminal Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000			\$	-			\$	-			\$	-
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000			\$	-			\$	-			\$	-
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000			\$	-			\$	-			\$	-
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000			\$	-			\$	-			\$	-
3	Maintenance Facility	Each	\$	123,921,884			\$	-			\$	-			\$	-
4	Parking - Structures	space	\$	-			\$	-			\$	-			\$	-
5	Parking - At Grade	space	\$	-			\$	-			\$	-			\$	-
Rail & Utility Relocation																
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896		0.49	\$	980,439		0.49	\$	980,439			\$	-
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896											\$	-
3	Single Track Removal	Mile	\$	130,048		0.49	\$	63,724		0.49	\$	63,724			\$	-
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288		0.49	\$	758,661		0.49	\$	758,661			\$	-
5	Major Utility Relocations - Urban	Mile	\$	1,084,416			\$	-			\$	-			\$	-
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168			\$	-			\$	-			\$	-
7	Major Utility Relocations - Suburban	Mile	\$	464,896			\$	-			\$	-			\$	-
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720			\$	-			\$	-			\$	-
ROW (NOT INCLUDED)																
ROW required for each segment																
1	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-
2	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-
3	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-
4	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-
5	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-
	ROW required for Temp. Construction Easement	Acre														
1	Dense Urban	Acre					\$	-			\$	-			\$	-
2	Urban	Acre					\$	-			\$	-			\$	-
3	Dense Suburban	Acre					\$	-			\$	-			\$	-
4	Suburban	Acre					\$	-			\$	-			\$	-
5	Undeveloped	Acre					\$	-			\$	-			\$	-
	Right-of-Way Required for Stations, Maintenance & Parking Facilities															
6	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-
7	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-
8	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-
9	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-
10	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-
	Environmental Mitigation = 3% Line Costs						\$	87,113			\$	120,379			\$	2,633,936
System Elements																
1	Signaling (ATC)	Mile	\$	2,070,000		0.49	\$	1,019,318		0.49	\$	1,019,318		0.49	\$	1,019,318
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000		0.49	\$	265,909		0.49	\$	265,909		0.49	\$	265,909
3	Wayside Protection System	Mile	\$	108,000		0.49	\$	53,182		0.49	\$	53,182		0.49	\$	53,182
Electrification Items																
1	Traction Power supply	Mile	\$	1,170,000		0.49	\$	576,136		0.49	\$	576,136		0.49	\$	576,136
2	Traction Power Distribution	Mile	\$	1,485,000		0.49	\$	731,250		0.49	\$	731,250		0.49	\$	731,250
		Subtotal					\$	5,636,671			\$	6,778,791			\$	93,077,582
Program Implementation Costs (per screening)							\$	1,437,351			\$	1,728,592			\$	23,734,783
Program Implementation Costs																
Contingencies (per screening) (25%)							\$	1,409,168			\$	1,694,698			\$	23,269,395
Subtotal							\$	8,483,190			\$	10,202,080			\$	140,081,761
Subtotal (Rounded)							\$	8,000,000			\$	10,000,000			\$	140,000,000



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 Tracks)				At-Grade (4 Tracks)				Tunnel (2 tracks - Mined)				
Subsection 1			Base: 2009 (3rd Quarter)		G				G				G				
					Start: 376 + 00	End: 450 + 00	1.40 Miles		Start: 376 + 00	End: 450 + 00	1.40 Miles		Start: 376 + 00	Start: 450 + 00	1.40 Miles		
Subsection Details					Quant.	Cost				Quant.	Cost				Quant.	Cost	
Double Track At-Grade (Mile)					Start: 376 + 00	End: 450 + 00	1.40 Miles		Start: 376 + 00	End: 450 + 00	1.40 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 376 + 00	End: 450 + 00	1.40 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Section - Total																	
1 Double Track Section - At Grade	Mile	\$	2,100,224			1.40	\$	2,943,496			0.74	\$	1,554,166			0.00	\$
2 Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	-			0.74	\$	3,478,118			1.40	\$
4 Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$
Four Track Section - Total																	
Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-			0.66	\$	2,772,296			0.00	\$
Four-Track Section - On Structure	Mile	\$	9,400,320			0	\$	-			0	\$	-			0	\$
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0	\$	-			0	\$	-			0	\$
Four-Track Section - In Trench	Mile	\$	9,400,320			0	\$	-			0	\$	-			0	\$
Single Track - Total																	
5 Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$
6 Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$
8 Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$
9 Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-			0	\$	-			0	\$
10 Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$
Earthwork Items																	
1 Site Preparation - Undeveloped	Acre	\$	9,216			18.69	\$	172,218			18.69	\$	172,218			18.69	\$
2 Total Cut	CY	\$	6			0.00	\$	-			0.00	\$	-			72314.81	\$
3 Total Fill	CY	\$	6			0.00	\$	-			0.00	\$	-			28925.93	\$
4 Borrow	CY	\$	13			0.00	\$	-			0.00	\$	-			0.00	\$
5 Spoil	CY	\$	13			0.00	\$	-			0.00	\$	-			43388.89	\$
6 Landscape erosion Control	Acre	\$	6,144			0.74	\$	4,547			0.74	\$	4,547			0.90	\$
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-			0.00	\$	-			0.07	\$
8 Special Drainage Facilities	5% Earthwork						\$	8,838				\$	8,838				\$
Structures, Tunnels, Walls																	
1 Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$	-			0.00	\$	-			0.00	\$
Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00	\$	-			0.00	\$	-			0.00	\$
2 High Structure	Mile	\$	40,424,448				\$	-				\$	-				\$
3 Long Span Structure	Mile	\$	61,919,232				\$	-				\$	-				\$
4 Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-				\$	-				\$
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$	-				\$	-				\$
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-				\$	-			1.40	\$
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-				\$
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-				\$	-				\$
9 Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$	-			0.74	\$	108,696,883				\$
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-				\$	-				\$
Double Track TBM (<6 Miles)	Mile	\$	106,637,312														
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896														
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-				\$	-				\$
12 Crossovers	ea	\$	442,368				\$	-				\$	-				\$
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$	-			0.00	\$	-			0.00	\$
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224			0.00	\$	-			0.00	\$	-				\$
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336														
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-				\$	-				\$
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856														
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				\$	-				\$	-			1.40	\$
17 Retaining Walls	Mile	\$	8,613,888			0.00	\$	-			0.00	\$	-				\$
18 Containment Walls	Mile	\$	5,907,456				\$	-				\$	-				\$
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-				\$	-				\$
Four Track Drill & Blast	Mile	\$	293,775,360				\$	-				\$	-				\$
Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-				\$	-				\$
Four Track TBM (<6 Miles)	Mile	\$	213,274,624														\$
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792														\$
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			0.00	\$	-				\$
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114														\$
Grade Separations																	
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-				\$	-				\$
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$	-				\$	-				\$
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	-				\$	-				\$
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-				\$	-				\$
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			0	\$	-			0	\$	-				\$



COST ELEMENTS				UNIT	UNIT PRICE	At-Grade (2 Tracks)				At-Grade (4 Tracks)				Tunnel (2 tracks - Mined)					
Subsection 1					Base: 2009 (3rd Quarter)	G				G				G					
						Start: 376 + 00	End: 450 + 00	1.40 Miles		Start: 376 + 00	End: 450 + 00	1.40 Miles		Start: 376 + 00	Start: 450 + 00	1.40 Miles			
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)						Start: 376 + 00	End: 450 + 00	1.40 Miles		Start: 376 + 00	End: 450 + 00	1.40 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 376 + 00	End: 450 + 00	1.40 Miles			
Double Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216					\$	-			\$	-			\$	-	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816					\$	-			\$	-			\$	-	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328					\$	-			\$	-			\$	-	
7	Street Bridging HSR Trench	ea	\$	1,398,784					\$	-			\$	-		0	\$	-	
8	Minor Crossing Closures	ea	\$	87,040					\$	-			\$	-		0	\$	-	
Building Items																			
1	Intermediate Passenger Stations	Each	\$	-					\$	-			\$	-			\$	-	
2	Terminal Passenger Stations	Each	\$	-					\$	-			\$	-			\$	-	
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000			1	15,000,000				1	\$	15,000,000			\$	-	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000					\$	-			\$	-			\$	-	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000					\$	-			\$	-		1	\$	15,000,000	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000					\$	-			\$	-			\$	-	
3	Maintenance Facility	Each	\$	123,921,884					\$	-			\$	-			\$	-	
4	Parking - Structures	space	\$	-					\$	-			\$	-			\$	-	
5	Parking - At Grade	space	\$	-					\$	-			\$	-			\$	-	
Rail & Utility Relocation																			
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896			0.70	\$	1,400,627			0.70	\$	1,400,627			\$	-	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896			0					0					\$	-	
3	Single Track Removal	Mile	\$	130,048			0.70	\$	91,034			0.70	\$	91,034			\$	-	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288			0.74	\$	1,145,733			0.74	\$	1,145,733			\$	-	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-				\$	-			\$	-	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-				\$	-			\$	-	
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-				\$	-			\$	-	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-				\$	-			\$	-	
ROW (NOT INCLUDED)																			
ROW required for each segment																			
1	Dense Urban	Acre	\$	2,786,321				\$	-				\$	-			\$	-	
2	Urban	Acre	\$	1,371,510				\$	-				\$	-			\$	-	
3	Dense Suburban	Acre	\$	908,134				\$	-				\$	-			\$	-	
4	Suburban	Acre	\$	208,418				\$	-				\$	-			\$	-	
5	Undeveloped	Acre	\$	3,642				\$	-				\$	-			\$	-	
ROW required for Temp. Construction Easement																0	\$	-	
1	Dense Urban	Acre						\$	-				\$	-			\$	-	
2	Urban	Acre						\$	-				\$	-			\$	-	
3	Dense Suburban	Acre						\$	-				\$	-			\$	-	
4	Suburban	Acre						\$	-				\$	-			\$	-	
5	Undeveloped	Acre						\$	-				\$	-			\$	-	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																			
6	Dense Urban	Acre	\$	2,786,321				\$	-				\$	-			\$	-	
7	Urban	Acre	\$	1,371,510				\$	-				\$	-			\$	-	
8	Dense Suburban	Acre	\$	908,134				\$	-				\$	-			\$	-	
9	Suburban	Acre	\$	208,418				\$	-				\$	-			\$	-	
10	Undeveloped	Acre	\$	3,642				\$	-				\$	-			\$	-	
Environmental Mitigation = 3% Line Costs								\$	622,995				\$	4,029,734			\$	7,190,530	
System Elements																			
1	Signaling (ATC)	Mile	\$	2,070,000			1.40	\$	2,901,136			1.40	\$	2,901,136			1.40	\$	2,901,136
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.40	\$	756,818			1.40	\$	756,818			1.40	\$	756,818
3	Wayside Protection System	Mile	\$	108,000			1.40	\$	151,364			1.40	\$	151,364			1.40	\$	151,364
Electrification Items																			
1	Traction Power supply	Mile	\$	1,170,000			1.40	\$	1,639,773			1.40	\$	1,639,773			1.40	\$	1,639,773
2	Traction Power Distribution	Mile	\$	1,485,000			1.40	\$	2,081,250			1.40	\$	2,081,250			1.40	\$	2,081,250
								\$	28,919,828				\$	145,884,535			\$	254,405,187	
Program Implementation Costs (per screening)								\$	7,374,556				\$	37,200,556			\$	64,873,323	
Program Implementation Costs																			
Contingencies (per screening) (25%)								\$	7,229,957				\$	36,471,134			\$	63,601,297	
Subtotal								\$	43,524,342				\$	219,556,225			\$	382,879,807	
Subtotal (Rounded)								\$	44,000,000				\$	220,000,000			\$	383,000,000	



Subsection 2	2A (4.2 miles)	2B (1.0 miles)	2C1 (1.0 miles)	2C2 (1.3 miles)					2D (1.2 miles)		
	At Grade	Berm	Berm	Aerial Viaduct	Berm	At Grade	Open Trench (HST Only)	Covered Trench/Tunnel (HST Only)	At Grade	Open Trench (HST Only)	Covered Trench (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$74	\$66	\$51 (2 tracks)	\$132 (3 tracks); \$93 (2 tracks)	\$130 (3 tracks); \$105 (2 tracks)	\$28 (3 tracks); \$26 (2 tracks)	\$107 (1 track); \$146 (2 tracks)	\$312 (1 track); \$317 (2 tracks)	\$37 (3 tracks); \$14 (2 tracks)	\$113 (1 track) \$159 (2 tracks)	\$294 (1 track); \$314 (2 tracks)
Acquisition Cost of Permanent ROW	Highest	Medium	Medium	Medium	Medium	Highest	Medium	Lowest	Highest	Medium	Lowest
Notes:	1. Existing 4 tracks extends from the Caltrain Bayshore Station to just north of the US 101 overpass. 2. Caltrain South San Francisco Station	1. Linden Ave and Scott St converted to undercrossings.	1. Assume Caltrain 2 track grade separation project completed (includes San Bruno Ave, San Mateo Ave, and Angus Ave converted to undercrossings).	<b>3 tracks (2 Caltrain-1 HST) -</b> 1. Three tracks on existing Caltrain alignment for approach to Caltrain and HST Millbrae station. <i>Must be combined with 1 track open trench or tunnel option.</i> <b>2 tracks (2 Caltrain)-</b> 1. Two tracks on existing Caltrain alignment for approach to Caltrain Millbrae station. <i>Must be combined with 2 track open trench or tunnel option.</i>	<b>3 tracks (2 Caltrain-1 HST) -</b> 1. Three tracks on existing Caltrain alignment for approach to Caltrain and HST Millbrae station. <i>Must be combined with 1 track open trench or tunnel option.</i> <b>2 tracks (2 Caltrain)-</b> 1. Two tracks on existing Caltrain alignment for approach to Caltrain Millbrae station. <i>Must be combined with 2 track open trench or tunnel option.</i>	<b>3 tracks (2 Caltrain-1 HST) -</b> 1. Three tracks on existing Caltrain alignment for approach to Caltrain and HST Millbrae station. <i>Must be combined with 1 track open trench or tunnel option.</i> <b>2 tracks (2 Caltrain)-</b> 1. Two tracks on existing Caltrain alignment for approach to Caltrain Millbrae station. 3. Center St and Santa Paula (Pedestrian) converted to an overcrossings. <i>Must be combined with 2 track open trench or tunnel option.</i>	<b>1 track -</b> 1. One track on new alignment for approach to HST Millbrae station. <i>Must be combined with 3 track aerial viaduct, berm, or at grade option.</i> <b>2 tracks -</b> 1. Two tracks on new alignment for approach to HST Millbrae station. <i>Must be combined with 2 track aerial viaduct, berm, or at grade option.</i>	<b>1 track -</b> 1. One track on new alignment for approach to HST Millbrae station. <i>Must be combined with 3 track aerial viaduct, berm, or at grade option.</i> <b>2 tracks -</b> 1. Two tracks on new alignment for approach to HST Millbrae station. <i>Must be combined with 2 track aerial viaduct, berm, or at grade option.</i>	<b>3 tracks (2 Caltrain-1 HST) -</b> 1. Three tracks on existing Caltrain alignment for Caltrain and HST Millbrae station. <i>Must be combined with 1 track open trench or tunnel option.</i> 2. Caltrain Millbrae Station. 3. HST Millbrae Station (1 platform) <b>2 tracks (2 Caltrain)-</b> 1. Two tracks on existing Caltrain alignment for Caltrain Millbrae station. <i>Must be combined with 2 track open trench or tunnel option.</i>	<b>1 track -</b> 1. One track on new alignment for HST Millbrae station. <i>Must be combined with 3 track at grade option.</i> 2. HST Millbrae station (1 platform) <b>2 tracks -</b> 1. Two tracks on new alignment for HST Millbrae station. <i>Must be combined with 2 track at grade option.</i> 2. HST Millbrae station (2 platforms)	<b>1 track -</b> 1. One track on new alignment for HST Millbrae station. <i>Must be combined with 3 track at grade option.</i> 2. HST Millbrae station (1 platform) <b>2 tracks -</b> 1. Two tracks on new alignment for HST Millbrae station. <i>Must be combined with 2 track at grade option.</i> 2. HST Millbrae station (2 platforms)



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade			
Subsection 2			Base: 2009 (3rd Quarter)		A			
					Start: 450 + 00	End: 671 + 00	4.19 Miles	
Subsection Details							Quant.	Cost
Double Track At-Grade (Mile)					Start: 450 + 00	End: 671 + 00	4.19 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Section - Total							4.19	\$ 8,790,710
1 Double Track Section - At Grade	Mile	\$	2,100,224					
2 Double Track Section - On Structure	Mile	\$	4,700,160				0.00	\$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				0.00	\$ -
4 Double Track Section - In Trench	Mile	\$	4,700,160				0.00	\$ -
Four Track Section - Total							0.00	\$ -
Four-track Section - At Grade	Mile	\$	4,200,448				0	\$ -
Four-Track Section - On Structure	Mile	\$	9,400,320				0	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0	\$ -
Four-Track Section - In Trench	Mile	\$	9,400,320				0.00	\$ -
Single Track - Total							0	\$ -
5 Single Track Section - At Grade	Mile	\$	1,549,312				0	\$ -
6 Single Track Section - On structure	Mile	\$	2,350,080				0	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0	\$ -
8 Single Track Section - In Trench	Mile	\$	2,350,080				0	\$ -
9 Freight Double Track - At Grade	Mile	\$	2,839,552				0	\$ -
10 Freight Single Track - At Grade	Mile	\$	1,549,312				0	\$ -
Earthwork Items							32.98	\$ 303,921
1 Site Preparation - Undeveloped	Acre	\$	9,216				0.00	\$ -
2 Total Cut	CY	\$	6.00				0.00	\$ -
3 Total Fill	CY	\$	6.00				0.00	\$ -
4 Borrow	CY	\$	13.00				0.00	\$ -
5 Spoil	CY	\$	13.00				0.00	\$ -
6 Landscape erosion Control	Acre	\$	6,144				0.00	\$ -
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.00	\$ -
8 Special Drainage Facilities	5% Earthwork							\$ 15,196
Structures, Tunnels, Walls							0.00	\$ -
1 Standard Structure (2 tracks)	Mile	\$	34,972,672					\$ -
Standard Structure (4 tracks)	Mile	\$	52,459,008					\$ -
2 High Structure	Mile	\$	40,424,448					\$ -
3 Long Span Structure	Mile	\$	61,919,232					\$ -
4 Waterway Crossing - Primary	Mile	\$	85,342,208					\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				0.02	\$ 1,743,360
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264					\$ -
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312					\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896					\$ -
9 Double Track Drill & Blast	Mile	\$	146,887,680				0.00	\$ -
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000					\$ -
Double Track TBM (<6 Miles)	Mile	\$	106,637,312					\$ -
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896					\$ -
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952					\$ -
12 Crossovers	ea	\$	442,368					\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				0.00	\$ -
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224				0.00	\$ -
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336					\$ -
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904					\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856					\$ -
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704					\$ -
17 Retaining Walls	Mile	\$	8,613,888				0.00	\$ -
18 Containment Walls	Mile	\$	5,907,456					\$ -
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080					\$ -
Four Track Drill & Blast	Mile	\$	293,775,360					\$ -
Four Track Mined (Soft Soil)	Mile	\$	158,400,000					\$ -
Four Track TBM (<6 Miles)	Mile	\$	213,274,624					\$ -
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792					\$ -
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00	\$ -
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114					\$ -
Grade Separations								
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352					\$ -



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade			
Subsection 2				Base: 2009 (3rd Quarter)	A			
					Start: 450 + 00	End: 671 + 00	4.19 Miles	
Subsection Details						Quant.	Cost	
Double Track At-Grade (Mile)					Start: 450 + 00	End: 671 + 00	4.19 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			0	\$ -
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			0	\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$ -
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$ -
8	Minor Crossing Closures	ea	\$	87,040				\$ -
Building Items								
1	Intermediate Passenger Stations	Each	\$	-				\$ -
2	Terminal Passenger Stations	Each	\$	-				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000			1	\$ 15,000,000
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$ -
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$ -
3	Maintenance Facility	Each	\$	123,921,884				\$ -
4	Parking - Structures	space	\$	-				\$ -
5	Parking - At Grade	space	\$	-				\$ -
Rail & Utility Relocation								
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$ -
3	Single Track Removal	Mile	\$	130,048				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$ -
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$ -
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$ -
ROW (Not Included)								
ROW required for each segment								
1	Dense Urban	Acre	\$	2,786,321				\$ -
2	Urban	Acre	\$	1,371,510				\$ -
3	Dense Suburban	Acre	\$	908,134				\$ -
4	Suburban	Acre	\$	208,418				\$ -
5	Undeveloped	Acre	\$	3,642				\$ -
ROW required for Temp. Construction Easement								
1	Dense Urban	Acre						\$ -
2	Urban	Acre						\$ -
3	Dense Suburban	Acre						\$ -
4	Suburban	Acre						\$ -
5	Undeveloped	Acre						\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities								
6	Dense Urban	Acre	\$	2,786,321				\$ -
7	Urban	Acre	\$	1,371,510				\$ -
8	Dense Suburban	Acre	\$	908,134				\$ -
9	Suburban	Acre	\$	208,418				\$ -
10	Undeveloped	Acre	\$	3,642				\$ -
Environmental Mitigation = 3% Line Costs								\$ 775,596
System Elements								
1	Signaling (ATC)	Mile	\$	2,070,000			4.19	\$ 8,664,205
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			4.19	\$ 2,260,227
3	Wayside Protection System	Mile	\$	108,000			4.19	\$ 452,045
Electrification Items								
1	Traction Power supply	Mile	\$	1,170,000			4.19	\$ 4,897,159
2	Traction Power Distribution	Mile	\$	1,485,000			4.19	\$ 6,215,625
Subtotal								\$ 49,118,044
Program Implementation Costs (per screening)								\$ 12,525,101
Program Implementation Costs								
Contingencies (per screening) (25%)								\$ 12,279,511
Subtotal								\$ 73,922,656
Subtotal (Rounded)								\$ 74,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Berm			
Subsection 2				Base: 2009 (3rd Quarter)	B			
					Start: 671 + 00	End: 724 + 00	1.00 Miles	
Subsection Details							Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 671 + 00	End: 724 + 00	1.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Section - Total								
1 Double Track Section - At Grade	Mile	\$	2,100,224				0.00	\$ -
2 Double Track Section - On Structure	Mile	\$	4,700,160				0.00	\$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				0.00	\$ -
4 Double Track Section - In Trench	Mile	\$	4,700,160				0.00	\$ -
Four Track Section - Total								
Four-track Section - At Grade	Mile	\$	4,200,448				0.50	\$ 2,108,179
Four-Track Section - On Structure	Mile	\$	9,400,320				0.50	\$ 4,717,964
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0.00	\$ -
Four-Track Section - In Trench	Mile	\$	9,400,320				0.00	\$ -
Single Track - Total								
5 Single Track Section - At Grade	Mile	\$	1,549,312				0.00	\$ -
6 Single Track Section - On structure	Mile	\$	2,350,080				0.00	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0.00	\$ -
8 Single Track Section - In Trench	Mile	\$	2,350,080				0.00	\$ -
9 Freight Double Track - At Grade	Mile	\$	2,839,552				0.00	\$ -
10 Freight Single Track - At Grade	Mile	\$	1,549,312				0.00	\$ -
Earthwork Items								
1 Site Preparation - Undeveloped	Acre	\$	9,216				13.38	\$ 123,345
2 Total Cut	CY	\$	6.00				0.00	\$ -
3 Total Fill	CY	\$	6.00				196296.30	\$ 1,177,778
4 Borrow	CY	\$	13.00				196296.30	\$ 2,551,852
5 Spoil	CY	\$	13.00				0.00	\$ -
6 Landscape erosion Control	Acre	\$	6,144				0.00	\$ -
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.00	\$ -
8 Special Drainage Facilities	5% Earthwork							\$ 192,649
Structures, Tunnels, Walls								
1 Standard Structure (2 tracks)	Mile	\$	34,972,672				0.50	\$ 17,552,572
Standard Structure (4 tracks)	Mile	\$	52,459,008					
2 High Structure	Mile	\$	40,424,448					\$ -
3 Long Span Structure	Mile	\$	61,919,232					\$ -
4 Waterway Crossing - Primary	Mile	\$	85,342,208					\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408					\$ -
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264					\$ -
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312					\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896					\$ -
9 Double Track Drill & Blast	Mile	\$	146,887,680				0.00	\$ -
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000					\$ -
Double Track TBM (<6 Miles)	Mile	\$	106,637,312					
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896					
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952					\$ -
12 Crossovers	ea	\$	442,368					\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				0.00	\$ -
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224				0.00	\$ -
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336					
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904					\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856					
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704					\$ -
17 Retaining Walls	Mile	\$	8,613,888				0.50	\$ 4,323,258
18 Containment Walls	Mile	\$	5,907,456					\$ -
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080					\$ -
Four Track Drill & Blast	Mile	\$	293,775,360					\$ -
Four Track Mined (Soft Soil)	Mile	\$	158,400,000					\$ -
Four Track TBM (<6 Miles)	Mile	\$	213,274,624					
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792					
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00	\$ -
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114					
Grade Separations								
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352					\$ -



COST ELEMENTS		UNIT	UNIT PRICE	Berm		
Subsection 2			Base: 2009 (3rd Quarter)	B		
				Start: 671 + 00	End: 724 + 00	1.00 Miles
Subsection Details						Quant. Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles
Double Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles
Four Track Elevated (Mile)				Start: 671 + 00	End: 724 + 00	1.00 Miles
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			0 \$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			2 \$ 5,519,360
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568			\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520			\$ -
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216			\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816			\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328			\$ -
7	Street Bridging HSR Trench	ea	\$ 1,398,784			\$ -
8	Minor Crossing Closures	ea	\$ 87,040			\$ -
Building Items						
1	Intermediate Passenger Stations	Each	\$ -			\$ -
2	Terminal Passenger Stations	Each	\$ -			\$ -
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000			\$ -
	Caltrain Passenger Station - On Structure	Each	\$15,000,000			\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			\$ -
	Caltrain Passenger Station - In Trench	Each	\$15,000,000			\$ -
3	Maintenance Facility	Each	\$ 123,921,884			\$ -
4	Parking - Structures	space	\$ -			\$ -
5	Parking - At Grade	space	\$ -			\$ -
Rail & Utility Relocation						
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896			\$ -
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896			\$ -
3	Single Track Removal	Mile	\$ 130,048			\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288			\$ -
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416			\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168			\$ -
7	Major Utility Relocations - Suburban	Mile	\$ 464,896			\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720			\$ -
ROW (Not Included)						
ROW required for each segment						
1	Dense Urban	Acre	\$ 2,786,321			\$ -
2	Urban	Acre	\$ 1,371,510			\$ -
3	Dense Suburban	Acre	\$ 908,134			\$ -
4	Suburban	Acre	\$ 208,418			\$ -
5	Undeveloped	Acre	\$ 3,642			\$ -
ROW required for Temp. Construction Easement						
1	Dense Urban	Acre				\$ -
2	Urban	Acre				\$ -
3	Dense Suburban	Acre				\$ -
4	Suburban	Acre				\$ -
5	Undeveloped	Acre				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities						
6	Dense Urban	Acre	\$ 2,786,321			\$ -
7	Urban	Acre	\$ 1,371,510			\$ -
8	Dense Suburban	Acre	\$ 908,134			\$ -
9	Suburban	Acre	\$ 208,418			\$ -
10	Undeveloped	Acre	\$ 3,642			\$ -
Environmental Mitigation = 3% Line Costs						\$ 1,148,009
System Elements						
1	Signaling (ATC)	Mile	\$ 2,070,000			1.00 \$ 2,077,841
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.00 \$ 542,045
3	Wayside Protection System	Mile	\$ 108,000			1.00 \$ 108,409
Electrification Items						
1	Traction Power supply	Mile	\$ 117,000			1.00 \$ 117,443
2	Traction Power Distribution	Mile	\$ 1,485,000			1.00 \$ 1,490,625
Subtotal						\$ 43,751,330
Program Implementation Costs (per screening)						\$ 11,156,589
Program Implementation Costs						
Contingencies (per screening) (25%)						\$ 10,937,832
Subtotal						\$ 65,845,751
Subtotal (Rounded)						\$ 66,000,000



COST ELEMENTS				UNIT	UNIT PRICE	Berm		Elevated Viaduct (2 Tracks)				Elevated Viaduct (3 Tracks)				Berm (2 Tracks)			
Subsection 2					Base: 2009 (3rd Quarter)	C1		C2		C2		C2		C2					
						Start: 724 + 00	End: 775 + 00	0.97 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles			
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile) (Three track where noted)							Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)							Start: 724 + 00	End: 775 + 00	0.97 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		
Double Track Tunnel (Mile)							Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)							Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)							Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)							Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		
Four Track Tunnel (Mile)							Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Trench (Mile)							Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Single Track At-Grade (Mile)							Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Single Track Elevated (Mile)							Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Single Track Tunnel (Mile)							Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Single Track Trench (Mile)							Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Section - Total																			
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$	-			0.00	\$	-			0.50	\$	1,050,112
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.97	\$	4,539,927			1.29	\$	6,053,236			0.79	\$	3,713,126
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-
Three Track Section - Total ( See note)																			
Three-track Section - At Grade					Mile	\$	3,150,336		0.00	\$	-		0.00	\$	-		0.00	\$	-
Three-Track Section - On Structure					Mile	\$	7,050,240		0.00	\$	-		0.00	\$	-		1.29	\$	9,079,855
Three-Track Section - In Tunnel or Subway					Mile	\$	7,050,240		0.00	\$	-		0.00	\$	-		0.00	\$	-
Three-Track Section - In Trench					Mile	\$	7,050,240		0.00	\$	-		0.00	\$	-		0.00	\$	-
Four Track Section - Total																			
Four-track Section - At Grade					Mile	\$	4,200,448		0.00	\$	-		0.00	\$	-		0.00	\$	-
Four-Track Section - On Structure					Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-		0.00	\$	-
Four-Track Section - In Tunnel or Subway					Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-		0.00	\$	-
Four-Track Section - In Trench					Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-		0.00	\$	-
Single Track - Total																			
5	Single Track Section - At Grade	Mile	\$	1,549,312			0.00	\$	-			0.00	\$	-			0.00	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080			0.00	\$	-			0.00	\$	-			0.00	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0.00	\$	-			0.00	\$	-			0.00	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080			0.00	\$	-			0.00	\$	-			0.00	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0.00	\$	-			0.00	\$	-			0.00	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0.00	\$	-			0.00	\$	-			0.00	\$	-
Earthwork Items																			
1	Site Preparation - Undeveloped	Acre	\$	9,216			7.61	\$	70,136			10.15	\$	93,514			17.17	\$	158,255
2	Total Cut	CY	\$	6.00			0.00	\$	-			0.00	\$	-			0.00	\$	-
3	Total Fill	CY	\$	6.00			0.00	\$	-			0.00	\$	-			0.00	\$	-
4	Borrow	CY	\$	13.00			0.00	\$	-			0.00	\$	-			0.00	\$	-
5	Spoil	CY	\$	13.00			0.00	\$	-			0.00	\$	-			0.00	\$	-
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$	-			0.00	\$	-			0.00	\$	-
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-			0.00	\$	-			0.00	\$	-
8	Special Drainage Facilities	5% Earthwork						\$	3,507				\$	4,676				\$	7,913
Structures, Tunnels, Walls																			
1	Standard Structure (2 tracks)	Mile	\$	34,972,672				\$	-			1.29	\$	45,040,562			0.00	\$	-
	Standard Structure (3 tracks)	Mile	\$	52,459,008													1.29	\$	67,560,844
2	High Structure	Mile	\$	40,424,448				\$	-				\$	-				\$	-
3	Long Span Structure	Mile	\$	61,919,232				\$	-				\$	-				\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-				\$	-				\$	-
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$	-				\$	-				\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-				\$	-				\$	-
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-				\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-				\$	-				\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$	-			0.00	\$	-			0.00	\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-				\$	-				\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312															
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896															
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-				\$	-				\$	-
12	Crossovers	ea	\$	442,368				\$	-				\$	-				\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$	-			0.00	\$	-			0.00	\$	-
14	Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224			0.00	\$	-			0.00	\$	-			0.00	\$	-
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336															
	Trench Long (1 track) (1000 + ft)	Mile	\$	40,266,957															
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-				\$	-				\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856															
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				\$	-				\$	-				\$	-
17	Retaining Walls	Mile	\$	8,613,888			0.97	\$	8,320,233			0.00	\$	-			0.00	\$	-
18	Containment Walls	Mile	\$	5,907,456				\$	-				\$	-				\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-				\$	-				\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-				\$	-				\$	-
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-				\$	-				\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624															
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792															
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			0.00	\$	-			0.00	\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114															



COST ELEMENTS			UNIT	UNIT PRICE	Berm				Elevated Viaduct (2 Tracks)				Elevated Viaduct (3 Tracks)				Berm (2 Tracks)																					
Subsection 2					Base: 2009 (3rd Quarter)				C1				C2				C2				C2																	
									Start: 724 + 00		End: 775 + 00		0.97 Miles		Start: 775 + 00		End: 843 + 00		1.29 Miles		Start: 775 + 00		End: 843 + 00		1.29 Miles		Start: 775 + 00		End: 843 + 00		1.29 Miles							
Subsection Details								Quant.	Cost				Quant.	Cost				Quant.	Cost				Quant.	Cost				Quant.	Cost									
Double Track At-Grade (Mile) (Three track where noted)						Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles						
Double Track Elevated (Mile)						Start: 724 + 00	End: 775 + 00	0.97 Miles				Start: 775 + 00	End: 843 + 00	1.29 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 775 + 00	End: 843 + 00	1.29 Miles				Start: 775 + 00	End: 843 + 00	1.29 Miles						
Double Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles						
Double Track Trench (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles						
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles						
Four Track Elevated (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 775 + 00	End: 843 + 00	1.29 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles						
Four Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles						
Four Track Trench (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles						
Single Track At-Grade (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles						
Single Track Elevated (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles						
Single Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles						
Single Track Trench (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles						
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)					ea	\$	2,759,680				\$	-			\$	-				\$	-				\$	-				\$	-		\$	-				
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)					ea	\$	2,029,568				\$	-			\$	-				\$	-				\$	-				\$	-		\$	-				
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)					ea	\$	3,563,520				\$	-			\$	-				\$	-				\$	-				\$	-		\$	-				
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)					ea	\$	3,593,216				\$	-			\$	-				\$	-				\$	-				\$	-		\$	-				
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)					ea	\$	2,850,816				\$	-			\$	-				\$	-				\$	-				\$	-		\$	-				
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)					ea	\$	3,171,328				\$	-			\$	-				\$	-				\$	-				\$	-		\$	-				
7 Street Bridging HSR Trench					ea	\$	1,398,784				\$	-			\$	-				\$	-				\$	-				\$	-		\$	-				
8 Minor Crossing Closures					ea	\$	87,040				\$	-			0	\$	-				0	\$	-				\$	-				\$	-		\$	-		
Building Items																																						
1 Intermediate Passenger Stations					Each	\$	-				\$	-			\$	-				\$	-				\$	-				\$	-		\$	-		\$	-	
2 Terminal Passenger Stations					Each	\$	-				\$	-			\$	-				\$	-				\$	-				\$	-		\$	-		\$	-	
Caltrain Passenger Station - At-Grade					Each	\$	15,000,000	1	\$	15,000,000			0	\$	-			0	\$	-			0	\$	-			0	\$	-			0	\$	-		\$	-
Caltrain Passenger Station - On Structure					Each	\$	15,000,000				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
Caltrain Passenger Station - In Tunnel or Subway					Each	\$	15,000,000				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
Caltrain Passenger Station - In Trench					Each	\$	15,000,000				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
3 Maintenance Facility					Each	\$	123,921,884				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
4 Parking - Structures					space	\$	-				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
5 Parking - At Grade					space	\$	-				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
Rail & Utility Relocation																																						
1 Single Track Relocation (Temporary)					Mile	\$	2,000,896				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
2 Single Track Relocation (Permanent)					Mile	\$	2,000,896				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
3 Single Track Removal					Mile	\$	130,048				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
4 Major Utility Relocations - Dense Urban					Mile	\$	1,548,288				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
5 Major Utility Relocations - Urban					Mile	\$	1,084,416				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
6 Major Utility Relocations - Dense Suburban					Mile	\$	775,168				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
7 Major Utility Relocations - Suburban					Mile	\$	464,896				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
8 Major Utility Relocations - Undeveloped					Mile	\$	30,720				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
ROW (Not Included)																																						
ROW required for each segment																																						
1 Dense Urban					Acre	\$	2,786,321				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
2 Urban					Acre	\$	1,371,510				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
3 Dense Suburban					Acre	\$	908,134				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
4 Suburban					Acre	\$	208,418				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
5 Undeveloped					Acre	\$	3,642				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
ROW required for Temp. Construction Easement																																						
1 Dense Urban					Acre						\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
2 Urban					Acre						\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
3 Dense Suburban					Acre						\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
4 Suburban					Acre						\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
5 Undeveloped					Acre						\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities																																						
6 Dense Urban					Acre	\$	2,786,321				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
7 Urban					Acre	\$	1,371,510				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
8 Dense Suburban					Acre	\$	908,134				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
9 Suburban					Acre	\$	208,418				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
10 Undeveloped					Acre	\$	3,642				\$	-			\$	-				\$	-				\$	-				\$	-			\$	-		\$	-
Environmental Mitigation = 3% Line Costs											\$	838,014				\$	1,535,760							\$	2,304,206								\$	1,821,870			\$	1,821,870
System Elements																																						
1 Signaling (ATC)					Mile	\$	2,070,000		0.97	\$	1,999,432			1.29	\$	2,665,909			1.29	\$	2,665,909			1.29	\$	2,665,909			1.29	\$	2,665,909			1.29	\$	2,665,909		
2 Communications (w/ Fiber Optic Backbone)					Mile	\$	540,000		0.97	\$	521,591			1.29	\$	695,455			1.29	\$	695,455			1.29	\$	695,455			1.29	\$	695,455			1.29	\$	695,455		
3 Wayside Protection System					Mile	\$	108,000		0.97	\$	104,318			1.29	\$	139,091			1.29	\$	139,091			1.29	\$	139,091			1.29	\$	139,091			1.29	\$	139,091		
Electrification Items																																						



COST ELEMENTS				UNIT	UNIT PRICE	Berm (3 Tracks)				At-Grade (2 Tracks)				At-Grade (3 Tracks)				Open Trench (1 Track)				
Subsection 2					Base: 2009 (3rd Quarter)	C2				C2				C2				C2				
						Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile) (Three track where noted)							Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 775 + 00	End: 843 + 00	1.29 Miles			Start: 775 + 00	End: 843 + 00	1.29 Miles			
Double Track Elevated (Mile)							Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)							Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Double Track Trench (Mile)							Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)							Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00		0.00 Miles			
Four Track Elevated (Mile)							Start: 775 + 00	End: 843 + 00	1.29 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)							Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Four Track Trench (Mile)							Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Single Track At-Grade (Mile)							Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Single Track Elevated (Mile)							Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Single Track Tunnel (Mile)							Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Single Track Trench (Mile)							Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Double Track Section - Total																						
1 Double Track Section - At Grade	Mile	\$	2,100,224					0.00	\$	-				1.29	\$	2,704,834				0.00	\$	-
2 Double Track Section - On Structure	Mile	\$	4,700,160					0.00	\$	-				0.00	\$	-				0.00	\$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160					0.00	\$	-				0.00	\$	-				0.00	\$	-
4 Double Track Section - In Trench	Mile	\$	4,700,160					0.00	\$	-				0.00	\$	-				0.00	\$	-
Three Track Section - Total ( See note)																						
Three-track Section - At Grade	Mile	\$	3,150,336					0.50	\$	1,575,168				0.00	\$	-				1.29	\$	4,057,251
Three-Track Section - On Structure	Mile	\$	7,050,240					0.79	\$	5,569,690				0.00	\$	-				0.00	\$	-
Three-Track Section - In Tunnel or Subway	Mile	\$	7,050,240					0.00	\$	-				0.00	\$	-				0.00	\$	-
Three-Track Section - In Trench	Mile	\$	7,050,240					0.00	\$	-				0.00	\$	-				0.00	\$	-
Four Track Section - Total																						
Four-track Section - At Grade	Mile	\$	4,200,448					0.00	\$	-				0.00	\$	-				0.00	\$	-
Four-Track Section - On Structure	Mile	\$	9,400,320					0.00	\$	-				0.00	\$	-				0.00	\$	-
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320					0.00	\$	-				0.00	\$	-				0	\$	-
Four-Track Section - In Trench	Mile	\$	9,400,320					0.00	\$	-				0.00	\$	-				0.00	\$	-
Single Track - Total																						
5 Single Track Section - At Grade	Mile	\$	1,549,312					0.00	\$	-				0.00	\$	-				0.00	\$	-
6 Single Track Section - On structure	Mile	\$	2,350,080					0.00	\$	-				0.00	\$	-				0.00 Miles	\$	-
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080					0.00	\$	-				0.00	\$	-				0	\$	-
8 Single Track Section - In Trench	Mile	\$	2,350,080					0.00	\$	-				0.00	\$	-				1.29	\$	3,026,618
9 Freight Double Track - At Grade	Mile	\$	2,839,552					0.00	\$	-				0.00	\$	-				0	\$	-
10 Freight Single Track - At Grade	Mile	\$	1,549,312					0.00	\$	-				0.00	\$	-				0	\$	-
Earthwork Items																						
1 Site Preparation - Undeveloped	Acre	\$	9,216					17.17	\$	158,255				10.15	\$	93,514				10.15	\$	93,514
2 Total Cut	CY	\$	6.00					1385185.19	\$	8,311,111				0.00	\$	-				554074.07	\$	3,324,444
3 Total Fill	CY	\$	6.00					503703.70	\$	3,022,222				0.00	\$	-				0.00	\$	-
4 Borrow	CY	\$	13.00					0.00	\$	-				0.00	\$	-				0.00	\$	-
5 Spoil	CY	\$	13.00					881481.48	\$	11,459,259				0.00	\$	-				554074.07	\$	7,202,963
6 Landscape erosion Control	Acre	\$	6,144					0.00	\$	-				0.00	\$	-				0.00	\$	-
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384					0.00	\$	-				0.00	\$	-				0.00	\$	-
8 Special Drainage Facilities	5% Earthwork								\$	1,147,542					\$	4,676					\$	531,046
Structures, Tunnels, Walls																						
1 Standard Structure (2 tracks)	Mile	\$	34,972,672						\$	-				0.00	\$	-				0.00	\$	-
Standard Structure (3 tracks)	Mile	\$	52,459,008					0.79	\$	41,442,616												
2 High Structure	Mile	\$	40,424,448						\$	-					\$	-					\$	-
3 Long Span Structure	Mile	\$	61,919,232						\$	-					\$	-					\$	-
4 Waterway Crossing - Primary	Mile	\$	85,342,208						\$	-					\$	-					\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408						\$	-					\$	-					\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264						\$	-					\$	-					\$	-
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312						\$	-					\$	-					\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896						\$	-					\$	-					\$	-
9 Double Track Drill & Blast	Mile	\$	146,887,680					0.00	\$	-				0.00	\$	-				0.00	\$	-
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000						\$	-					\$	-					\$	-
Double Track TBM (<6 Miles)	Mile	\$	106,637,312																			
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																			
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952						\$	-					\$	-					\$	-
12 Crossovers	ea	\$	442,368						\$	-					\$	-					\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080					0.00	\$	-				0.00	\$	-				0.00	\$	-
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224					0.00	\$	-				0.00	\$	-				0.00	\$	-
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336																			
Trench Long (1 track) (1000 + ft)	Mile	\$	40,266,957																1.29	\$	51,858,960	
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904						\$	-					\$	-				0.00	\$	-
Trench Short (4																						



COST ELEMENTS			UNIT	UNIT PRICE	Berm (3 Tracks)				At-Grade (2 Tracks)				At-Grade (3 Tracks)				Open Trench (1 Track)					
Subsection 2				Base: 2009 (3rd Quarter)	C2				C2				C2				C2					
					Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles			
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile) (Three track where noted)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)					Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Single Track At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Single Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Single Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Single Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles			
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -			0	\$ -			0	\$ -				\$ -			
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -				\$ -				\$ -				\$ -			
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -			2	\$ 7,127,040			2	\$ 7,127,040				\$ -			
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -				\$ -				\$ -				\$ -			
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -			0	\$ -			0	\$ -				\$ -			
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -				\$ -				\$ -				\$ -			
7	Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -				\$ -				\$ -			0	\$ -			
8	Minor Crossing Closures	ea	\$ 87,040				\$ -			2	\$ 174,080			1	\$ 87,040			1	\$ 87,040			
Building Items																						
1	Intermediate Passenger Stations	Each	\$ -				\$ -				\$ -				\$ -				\$ -			
2	Terminal Passenger Stations	Each	\$ -				\$ -				\$ -				\$ -				\$ -			
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000			0	\$ -			0	\$ -			0	\$ -				\$ -			
	Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -				\$ -				\$ -				\$ -			
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -				\$ -				\$ -			
	Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -				\$ -				\$ -				\$ -			
3	Maintenance Facility	Each	\$ 123,921,884				\$ -				\$ -				\$ -				\$ -			
4	Parking - Structures	space	\$ -				\$ -				\$ -				\$ -				\$ -			
5	Parking - At Grade	space	\$ -				\$ -				\$ -				\$ -				\$ -			
Rail & Utility Relocation																						
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -				\$ -			
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -				\$ -			
3	Single Track Removal	Mile	\$ 130,048				\$ -				\$ -				\$ -				\$ -			
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -				\$ -				\$ -			
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -				\$ -				\$ -			
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -				\$ -				\$ -			
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -				\$ -				\$ -			
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -				\$ -			
ROW (Not Included)																						
ROW required for each segment																						
1	Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -				\$ -			
2	Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -				\$ -			
3	Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -				\$ -			
4	Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -				\$ -			
5	Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -				\$ -			
ROW required for Temp. Construction Easement																						
1	Dense Urban	Acre					\$ -				\$ -				\$ -				\$ -			
2	Urban	Acre					\$ -				\$ -				\$ -				\$ -			
3	Dense Suburban	Acre					\$ -				\$ -				\$ -				\$ -			
4	Suburban	Acre					\$ -				\$ -				\$ -				\$ -			
5	Undeveloped	Acre					\$ -				\$ -				\$ -				\$ -			
Right-of-Way Required for Stations, Maintenance & Parking Facilities																						
6	Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -				\$ -			
7	Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -				\$ -			
8	Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -				\$ -			
9	Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -				\$ -			
10	Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -				\$ -			
Environmental Mitigation = 3% Line Costs							\$ 2,309,784				\$ 303,124				\$ 341,086				\$ 1,983,738			
System Elements																						
1	Signaling (ATC)	Mile	\$ 2,070,000			1.29	\$ 2,665,909			1.29	\$ 2,665,909			1.29	\$ 2,665,909			1.29	\$ 695,455			
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.29	\$ 695,455			1.29	\$ 695,455			1.29	\$ 695,455			1.29	\$ 139,091			
3	Wayside Protection System	Mile	\$ 108,000			1.29	\$ 139,091			1.29	\$ 139,091			1.29	\$ 139,091				\$ -			
Electrification Items																						
1	Traction Power supply	Mile	\$ 1,170,000			1.29	\$ 1,506,818			1.29	\$ 1,506,818			1.29	\$ 1,506,818			1.29	\$ 1,912,500			
2	Traction Power Distribution	Mile	\$ 1,485,000			1.29	\$ 1,912,500			1.29	\$ 1,912,500			1.29	\$ 1,912,500				\$ -			
							\$ 86,222,364				\$ 17,327,041				\$ 18,630,379				\$ 70,855,368			
Program Implementation Costs (per screening)							\$ 21,986,703				\$ 4,418,395				\$ 4,750,747				\$ 18,068,119			
Program Implementation Costs																						
Contingencies (per screening) (25%)							\$ 21,555,591				\$ 4,331,760				\$ 4,657,595				\$ 17,713,842			
Subtotal							\$ 129,764,658					\$ 26,077,196					\$ 28,038,720					\$ 106,637,329

Note: unit price for three track is interpolated from double and four tracks



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (2 Tracks)				Covered Trench (1 Track) (HST only)				Covered Trench (2 Tracks) (HST only)				
Subsection 2				Base: 2009 (3rd Quarter)	C2				C2				C2				
					Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile) (Three track where noted)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles	
Double Track Trench (Mile)						Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles				0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Single Track At-Grade (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total																	
1 Double Track Section - At Grade	Mile	\$	2,100,224				0.00	\$ -				0.00	\$ -		0.00	\$ -	
2 Double Track Section - On Structure	Mile	\$	4,700,160				0.00	\$ -				0.00	\$ -		0.00	\$ -	
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				0.00	\$ -				0.00	\$ -		1.29	\$ 6,053,236	
4 Double Track Section - In Trench	Mile	\$	4,700,160				1.29	\$ 6,053,236				0.00	\$ -		0.00	\$ -	
Three Track Section - Total ( See note)																	
Three-track Section - At Grade	Mile	\$	3,150,336				0.00	\$ -				0.00	\$ -		0.00	\$ -	
Three-Track Section - On Structure	Mile	\$	7,050,240				0.00	\$ -				0.00	\$ -		0.00	\$ -	
Three-Track Section - In Tunnel or Subway	Mile	\$	7,050,240				0.00	\$ -				0.00	\$ -		0.00	\$ -	
Three-Track Section - In Trench	Mile	\$	7,050,240				0.00	\$ -				0.00	\$ -		0.00	\$ -	
Four Track Section - Total																	
Four-track Section - At Grade	Mile	\$	4,200,448				0.00	\$ -				0.00	\$ -		0.00	\$ -	
Four-Track Section - On Structure	Mile	\$	9,400,320				0.00	\$ -				0.00	\$ -		0.00	\$ -	
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0	\$ -				0.00	\$ -		0.00	\$ -	
Four-Track Section - In Trench	Mile	\$	9,400,320				0.00	\$ -				0	\$ -		0	\$ -	
Single Track - Total																	
5 Single Track Section - At Grade	Mile	\$	1,549,312				0	\$ -				0.00	\$ -		0	\$ -	
6 Single Track Section - On structure	Mile	\$	2,350,080				0	\$ -				0	\$ -		0	\$ -	
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0	\$ -				0	\$ -		0	\$ -	
8 Single Track Section - In Trench	Mile	\$	2,350,080				0	\$ -				1.29	\$ 3,026,618		0	\$ -	
9 Freight Double Track - At Grade	Mile	\$	2,839,552				0	\$ -				0	\$ -		0	\$ -	
10 Freight Single Track - At Grade	Mile	\$	1,549,312				0	\$ -				0	\$ -		0	\$ -	
Earthwork Items																	
1 Site Preparation - Undeveloped	Acre	\$	9,216				27.32	\$ 251,769				10.15	\$ 93,514		17.17	\$ 158,255	
2 Total Cut	CY	\$	6.00				554074.07	\$ 3,324,444				554074.07	\$ 3,324,444		554074.07	\$ 3,324,444	
3 Total Fill	CY	\$	6.00				0.00	\$ -				0.00	\$ -		0.00	\$ -	
4 Borrow	CY	\$	13.00				0.00	\$ -				0.00	\$ -		0.00	\$ -	
5 Spoil	CY	\$	13.00				554074.07	\$ 7,202,963				554074.07	\$ 7,202,963		554074.07	\$ 7,202,963	
6 Landscape erosion Control	Acre	\$	6,144				0.00	\$ -				0.00	\$ -		0.00	\$ -	
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.00	\$ -				0.00	\$ -		0.00	\$ -	
8 Special Drainage Facilities	5% Earthwork							\$ 538,959					\$ 531,046			\$ 534,283	
Structures, Tunnels, Walls																	
1 Standard Structure (2 tracks)	Mile	\$	34,972,672				0.00	\$ -				0.00	\$ -		0.00	\$ -	
Standard Structure (3 tracks)	Mile	\$	52,459,008														
2 High Structure	Mile	\$	40,424,448					\$ -					\$ -			\$ -	
3 Long Span Structure	Mile	\$	61,919,232					\$ -					\$ -			\$ -	
4 Waterway Crossing - Primary	Mile	\$	85,342,208					\$ -					\$ -			\$ -	
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408					\$ -					\$ -			\$ -	
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264					\$ -					\$ -			\$ -	
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312					\$ -					\$ -			\$ -	
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896					\$ -					\$ -			\$ -	
9 Double Track Drill & Blast	Mile	\$	146,887,680				0.00	\$ -				0.00	\$ -			\$ -	
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000					\$ -					\$ -			\$ -	
Double Track TBM (<6 Miles)	Mile	\$	106,637,312														
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896														
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952					\$ -					\$ -			\$ -	
12 Crossovers	ea	\$	442,368					\$ -					\$ -			\$ -	
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				0.00	\$ -				0.00	\$ -		1.29	\$ 169,029,042	
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224				1.29	\$ 74,084,228				0.00	\$ -		0.00	\$ -	
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336														
Trench Long (1 track) (1000 + ft)	Mile	\$	40,266,957														
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904					\$ -					\$ -			\$ -	
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856														
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704					\$ -				1.29	\$ 15,259,695		1.29	\$ 15,259,695	
17 Retaining Walls	Mile	\$	8,613,888				0.00	\$ -				0.00	\$ -		0.00	\$ -	
18 Containment Walls	Mile	\$	5,907,456				0.00	\$ -					\$ -			\$ -	
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080					\$ -				1.29	\$ 169,029,042			\$ -	
Four Track Drill & Blast	Mile	\$	293,775,360					\$ -					\$ -			\$ -	
Four Track Mined (Soft Soil)	Mile	\$	158,400,000					\$ -					\$ -			\$ -	
Four Track TBM (<6 Miles)	Mile	\$	213,274,624														
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792														
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00	\$ -				0.00	\$ -		0.00	\$ -	
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114														
Grade Separations																	
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352					\$ -					\$ -			\$ -	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528					\$ -					\$ -			\$ -	



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (2 Tracks)				Covered Trench (1 Track) (HST only)				Covered Trench (2 Tracks) (HST only)					
Subsection 2			Base: 2009 (3rd Quarter)	C2				C2				C2						
				Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles		Start: 775 + 00	End: 843 + 00	1.29 Miles				
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile) (Three track where noted)						Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				
Double Track Elevated (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				
Double Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles				Start: 775 + 00	End: 843 + 00	1.29 Miles				
Double Track Trench (Mile)						Start: 775 + 00	End: 843 + 00	1.29 Miles				Start: 0 + 00		0.00 Miles				
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Elevated (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Trench (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				
Single Track At-Grade (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				
Single Track Elevated (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				
Single Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				
Single Track Trench (Mile)						Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				
						Start: 0 + 00		0.00 Miles			Start: 775 + 00	End: 843 + 00	1.29 Miles					
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	-					\$	-			
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-					\$	-			
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$	-					\$	-			
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-					\$	-			
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$	-					\$	-			
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-					\$	-			
7	Street Bridging HSR Trench	ea	\$	1,398,784		0		\$	-		0			\$	-			
8	Minor Crossing Closures	ea	\$	87,040		1		\$	87,040		0			\$	-			
Building Items																		
1	Intermediate Passenger Stations	Each	\$	-				\$	-					\$	-			
2	Terminal Passenger Stations	Each	\$	-				\$	-					\$	-			
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$	-					\$	-			
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-					\$	-			
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-					\$	-			
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-					\$	-			
3	Maintenance Facility	Each	\$	123,921,884				\$	-					\$	-			
4	Parking - Structures	space	\$	-				\$	-					\$	-			
5	Parking - At Grade	space	\$	-				\$	-					\$	-			
Rail & Utility Relocation																		
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-					\$	-			
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-					\$	-			
3	Single Track Removal	Mile	\$	130,048				\$	-					\$	-			
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-					\$	-			
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-					\$	-			
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-					\$	-			
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-					\$	-			
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-					\$	-			
ROW (Not Included)																		
ROW required for each segment																		
1	Dense Urban	Acre	\$	2,786,321				\$	-					\$	-			
2	Urban	Acre	\$	1,371,510				\$	-					\$	-			
3	Dense Suburban	Acre	\$	908,134				\$	-					\$	-			
4	Suburban	Acre	\$	208,418				\$	-					\$	-			
5	Undeveloped	Acre	\$	3,642				\$	-					\$	-			
ROW required for Temp. Construction Easement																		
1	Dense Urban	Acre						\$	-					\$	-			
2	Urban	Acre						\$	-					\$	-			
3	Dense Suburban	Acre						\$	-					\$	-			
4	Suburban	Acre						\$	-					\$	-			
5	Undeveloped	Acre						\$	-					\$	-			
Right-of-Way Required for Stations, Maintenance & Parking Facilities																		
6	Dense Urban	Acre	\$	2,786,321				\$	-					\$	-			
7	Urban	Acre	\$	1,371,510				\$	-					\$	-			
8	Dense Suburban	Acre	\$	908,134				\$	-					\$	-			
9	Suburban	Acre	\$	208,418				\$	-					\$	-			
10	Undeveloped	Acre	\$	3,642				\$	-					\$	-			
Environmental Mitigation = 3% Line Costs								\$	2,746,279					\$	5,954,020	\$	6,046,858	
System Elements																		
1	Signaling (ATC)	Mile	\$	2,070,000		1.29		\$	695,455		1.29		\$	695,455		1.29	\$	695,455
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000		1.29		\$	139,091		1.29		\$	139,091		1.29	\$	139,091
3	Wayside Protection System	Mile	\$	108,000				\$	-		1.29		\$	-		1.29	\$	-
Electrification Items																		
1	Traction Power supply	Mile	\$	1,170,000		1.29		\$	1,912,500		1.29		\$	1,912,500		1.29	\$	1,912,500
2	Traction Power Distribution	Mile	\$	1,485,000				\$	-				\$	-			\$	-
								\$	97,035,964				\$	207,168,388			\$	210,355,821
Program Implementation Costs (per screening)								\$	24,744,171				\$	52,827,939			\$	53,640,734
Program Implementation Costs																		
Contingencies (per screening) (25%)								\$	24,258,991				\$	51,792,097			\$	52,588,955
Subtotal							\$	146,039,125			\$	311,788,424			\$	316,585,511		

Note: unit price for three track is interpolated from double and four tracks



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 Tracks)				At-Grade (3 Tracks)				Open Trench (HST only) (1 Track)				Open Trench (HST only) (2 Tracks)					
Subsection 2				Base: 2009 (3rd Quarter)	D				D				D				D					
					Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles			
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)					Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Single Track At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Single Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Single Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Single Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 0 + 00		0.00 Miles			
Double Track Section - Total																						
1 Double Track Section - At Grade	Mile	\$	2,100,224			1.17	\$	2,466,172			0.00	\$	-			0.00	\$	-		0.00	\$	-
2 Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-		0.00	\$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-		0.00	\$	-
4 Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-		1.17	\$	5,519,127
Three Track Section - Total ( See note)																						
Three-track Section - At Grade	Mile	\$	3,150,336			0.00	\$	-			1.17	\$	3,699,258			0.00	\$	-		0.00	\$	-
Three-Track Section - On Structure	Mile	\$	7,050,240			0.00	\$	-			0.00	\$	-			0.00	\$	-		0.00	\$	-
Three-Track Section - In Tunnel or Subway	Mile	\$	7,050,240			0.00	\$	-			0.00	\$	-			0.00	\$	-		0.00	\$	-
Three-Track Section - In Trench	Mile	\$	7,050,240			0.00	\$	-			0.00	\$	-			0.00	\$	-		0.00	\$	-
Four Track Section - Total																						
Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-			0.00	\$	-			0.00	\$	-		0.00	\$	-
Four-Track Section - On Structure	Mile	\$	9,400,320			0	\$	-			0	\$	-			0	\$	-		0	\$	-
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0	\$	-			0	\$	-			0	\$	-		0	\$	-
Four-Track Section - In Trench	Mile	\$	9,400,320			0	\$	-			0	\$	-			0.00	\$	-		0.00	\$	-
Single Track - Total																						
5 Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-		0	\$	-
6 Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-		0	\$	-
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-		0	\$	-
8 Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			0	\$	-			1.17	\$	2,759,564		0	\$	-
9 Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-			0	\$	-			0	\$	-		0	\$	-
10 Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-		0	\$	-
Earthwork Items																						
1 Site Preparation - Undeveloped	Acre	\$	9,216			9.25	\$	85,263			15.66	\$	144,291			7.12	\$	65,587		9.25	\$	85,263
2 Total Cut	CY	\$	6.00			0.00	\$	-			0.00	\$	-			505185.19	\$	3,031,111		505185.19	\$	3,031,111
3 Total Fill	CY	\$	6.00			0.00	\$	-			0.00	\$	-			0.00	\$	-		0.00	\$	-
4 Borrow	CY	\$	13.00			0.00	\$	-			0.00	\$	-			0.00	\$	-		0.00	\$	-
5 Spoil	CY	\$	13.00			0.00	\$	-			0.00	\$	-			505185.19	\$	6,567,407		505185.19	\$	6,567,407
6 Landscape erosion Control	Acre	\$	6,144			0.00	\$	-			0.00	\$	-			15.66	\$	96,194		15.66	\$	96,194
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-			0.00	\$	-			1.17	\$	169,542		1.17	\$	169,542
8 Special Drainage Facilities	5% Earthwork					\$	4,263			\$	7,215			\$	496,492			\$	497,476			
Structures, Tunnels, Walls																						
1 Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$	-			0.00	\$	-			0.00	\$	-		0.00	\$	-
Standard Structure (4 tracks)	Mile	\$	52,459,008																			
2 High Structure	Mile	\$	40,424,448			\$	-			\$	-			\$	-			\$	-	\$	-	
3 Long Span Structure	Mile	\$	61,919,232			\$	-			\$	-			\$	-			\$	-	\$	-	
4 Waterway Crossing - Primary	Mile	\$	85,342,208			\$	-			\$	-			\$	-			\$	-	\$	-	
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			\$	-			\$	-			\$	-			\$	-	\$	-	
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$	-			\$	-			\$	-			\$	-	\$	-	
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-			\$	-			\$	-			\$	-	\$	-	
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			\$	-			\$	-			\$	-			\$	-	\$	-	
9 Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$	-			0.00	\$	-			0.00	\$	-		0.00	\$	-
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000			\$	-			\$	-			\$	-			\$	-	\$	-	
Double Track TBM (<6 Miles)	Mile	\$	106,637,312																			
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																			
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$	-			\$	-			\$	-			\$	-	\$	-	
12 Crossovers	ea	\$	442,368			\$	-			\$	-			\$	-			\$	-	\$	-	
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$	-			0.00	\$	-			0.00	\$	-		0.00	\$	-
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224			0.00	\$	-			0.00	\$	-			0.00	\$	-		1.17	\$	67,547,384
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336																			
Trench Long (1 track) (1000 + ft)	Mile	\$	40,266,957											1.17	\$	47,283,169						
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904			\$	-			\$	-			\$	-			\$	-	\$	-	
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																			
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			\$	-			\$	-			\$	-			\$	-	\$	-	
17 Retaining Walls	Mile	\$	8,613,888			0.00	\$	-			0.00	\$	-		</							



COST ELEMENTS				UNIT	UNIT PRICE	At-Grade (2 Tracks)				At-Grade (3 Tracks)				Open Trench (HST only) (1 Track)				Open Trench (HST only) (2 Tracks)			
Subsection 2				Base: 2009 (3rd Quarter)		D				D				D				D			
						Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles	
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)				Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles							
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles							
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles							
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles							
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles							
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles							
Single Track At-Grade (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Single Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles							
Single Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles							
Single Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles							
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)				ea	\$	3,563,520	0	\$	-	0	\$	-		\$	-		\$	-	\$	-	
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)				ea	\$	3,593,216		\$	-		\$	-		\$	-		\$	-	\$	-	
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)				ea	\$	2,850,816		\$	-		\$	-		\$	-		\$	-	\$	-	
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)				ea	\$	3,171,328		\$	-		\$	-		\$	-		\$	-	\$	-	
7 Street Bridging HSR Trench				ea	\$	1,398,784		\$	-		\$	-		\$	-		\$	-	\$	-	
8 Minor Crossing Closures				ea	\$	87,040	1	\$	87,040	1	\$	87,040		\$	87,040	1	\$	87,040	1	\$	87,040
Building Items																					
1 Intermediate Passenger Stations				Each	\$	-		\$	-		\$	-		\$	-		\$	-		\$	-
1 Intermediate Passenger Stations (Millbrae)				Each	\$	12,562,617	0	\$	-	0.5	\$	6,281,309		\$	6,281,309	0.5	\$	6,281,309	1	\$	12,562,617
2 Terminal Passenger Stations				Each	\$	-		\$	-		\$	-		\$	-		\$	-		\$	-
Caltrain Passenger Station - At-Grade				Each	\$	15,000,000	0	\$	-	0.5	\$	7,500,000		\$	-		\$	-		\$	-
Caltrain Passenger Station - On Structure				Each	\$	15,000,000		\$	-		\$	-		\$	-		\$	-		\$	-
Caltrain Passenger Station - In Tunnel or Subway				Each	\$	15,000,000		\$	-		\$	-		\$	-		\$	-		\$	-
Caltrain Passenger Station - In Trench				Each	\$	15,000,000		\$	-		\$	-		\$	-		\$	-		\$	-
3 Maintenance Facility				Each	\$	123,921,884		\$	-		\$	-		\$	-		\$	-		\$	-
4 Parking - Structures				space	\$	-		\$	-		\$	-		\$	-		\$	-		\$	-
5 Parking - At Grade				space	\$	-		\$	-		\$	-		\$	-		\$	-		\$	-
Rail & Utility Relocation																					
1 Single Track Relocation (Temporary)				Mile	\$	2,000,896		\$	-		\$	-		\$	-		\$	-		\$	-
2 Single Track Relocation (Permanent)				Mile	\$	2,000,896		\$	-		\$	-		\$	-		\$	-		\$	-
3 Single Track Removal				Mile	\$	130,048		\$	-		\$	-		\$	-		\$	-		\$	-
4 Major Utility Relocations - Dense Urban				Mile	\$	1,548,288		\$	-		\$	-		\$	-		\$	-		\$	-
5 Major Utility Relocations - Urban				Mile	\$	1,084,416		\$	-		\$	-		\$	-		\$	-		\$	-
6 Major Utility Relocations - Dense Suburban				Mile	\$	775,168		\$	-		\$	-		\$	-		\$	-		\$	-
7 Major Utility Relocations - Suburban				Mile	\$	464,896		\$	-		\$	-		\$	-		\$	-		\$	-
8 Major Utility Relocations - Undeveloped				Mile	\$	30,720		\$	-		\$	-		\$	-		\$	-		\$	-
ROW (Not Included)																					
ROW required for each segment																					
1 Dense Urban				Acre	\$	2,786,321		\$	-		\$	-		\$	-		\$	-		\$	-
2 Urban				Acre	\$	1,371,510		\$	-		\$	-		\$	-		\$	-		\$	-
3 Dense Suburban				Acre	\$	908,134		\$	-		\$	-		\$	-		\$	-		\$	-
4 Suburban				Acre	\$	208,418		\$	-		\$	-		\$	-		\$	-		\$	-
5 Undeveloped				Acre	\$	3,642		\$	-		\$	-		\$	-		\$	-		\$	-
ROW required for Temp. Construction Easement																					
1 Dense Urban				Acre				\$	-		\$	-		\$	-		\$	-		\$	-
2 Urban				Acre				\$	-		\$	-		\$	-		\$	-		\$	-
3 Dense Suburban				Acre				\$	-		\$	-		\$	-		\$	-		\$	-
4 Suburban				Acre				\$	-		\$	-		\$	-		\$	-		\$	-
5 Undeveloped				Acre				\$	-		\$	-		\$	-		\$	-		\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities																					
6 Dense Urban				Acre	\$	2,786,321		\$	-		\$	-		\$	-		\$	-		\$	-
7 Urban				Acre	\$	1,371,510		\$	-		\$	-		\$	-		\$	-		\$	-
8 Dense Suburban				Acre	\$	908,134		\$	-		\$	-		\$	-		\$	-		\$	-
9 Suburban				Acre	\$	208,418		\$	-		\$	-		\$	-		\$	-		\$	-
10 Undeveloped				Acre	\$	3,642		\$	-		\$	-		\$	-		\$	-		\$	-
Environmental Mitigation = 3% Line Costs							\$	79,282			\$	531,573			\$	2,005,122				\$	2,884,895
System Elements																					
1 Signaling (ATC)				Mile	\$	2,070,000	1.17	\$	2,430,682	1.17	\$	2,430,682		1.17	\$	2,430,682		1.17	\$	2,430,682	
2 Communications (w/ Fiber Optic Backbone)				Mile	\$	540,000	1.17	\$	634,091	1.17	\$	634,091		1.17	\$	634,091		1.17	\$	634,091	
3 Wayside Protection System				Mile	\$	108,000	1.17	\$	126,818	1.17	\$	126,818		1.17	\$	126,818		1.17	\$	126,818	
Electrification Items																					
1 Traction Power supply				Mile	\$	1,170,000	1.17	\$	1,373,864	1.17	\$	1,373,864		1.17	\$	1,373,864		1.17	\$	1,373,864	
2 Traction Power Distribution				Mile	\$	1,485,000	1.17	\$	1,743,750	1.17	\$	1,743,750		1.17	\$	1,743,750		1.17	\$	1,743,750	
Program Implementation Costs (per screening)								\$	9,031,225		\$	24,559,890			\$	75,151,741			\$	105,357,261	
Program Implementation Costs								\$	2,302,962		\$	6,262,772			\$	19,163,694			\$	26,866,102	
Contingencies (per screening) (25%)								\$	2,257,806		\$	6,139,973			\$	18,787,935			\$	26,339,315	
Subtotal								\$	13,591,993		\$	36,962,635			\$	113,103,371			\$	158,562,678	
Subtotal (Rounded)								\$	14,000,000		\$	37,000,000			\$	113,000,000			\$	159,000,000	



COST ELEMENTS			UNIT	UNIT PRICE	Covered Trench (HST only) (1 Track)				Covered Trench (HST only) (2 Tracks)				
Subsection 2				Base: 2009 (3rd Quarter)	D				D				
					Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles		
Subsection Details							Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Single Track At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Single Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Single Track Tunnel (Mile)					Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 0 + 00		0.00 Miles		
Single Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Section - Total													
1 Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$	-			0.00	\$	-
2 Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	-			1.17	\$	5,519,127
4 Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-
Three Track Section - Total ( See note)													
Three-track Section - At Grade	Mile	\$	3,150,336			0.00	\$	-			0.00	\$	-
Three-Track Section - On Structure	Mile	\$	7,050,240			0.00	\$	-			0.00	\$	-
Three-Track Section - In Tunnel or Subway	Mile	\$	7,050,240			0.00	\$	-			0.00	\$	-
Three-Track Section - In Trench	Mile	\$	7,050,240			0.00	\$	-			0.00	\$	-
Four Track Section - Total													
Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-			0.00	\$	-
Four-Track Section - On Structure	Mile	\$	9,400,320			0	\$	-			0	\$	-
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$	-			0.00	\$	-
Four-Track Section - In Trench	Mile	\$	9,400,320			0	\$	-			0	\$	-
Single Track - Total													
5 Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-
6 Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-			0	\$	-
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			1.17	\$	2,759,564			0	\$	-
8 Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			0	\$	-
9 Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-			0	\$	-
10 Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-
Earthwork Items													
1 Site Preparation - Undeveloped	Acre	\$	9,216			9.25	\$	85,263			15.66	\$	144,291
2 Total Cut	CY	\$	6.00			298518.52	\$	1,791,111			505185.19	\$	3,031,111
3 Total Fill	CY	\$	6.00			0.00	\$	-			0.00	\$	-
4 Borrow	CY	\$	13.00			0.00	\$	-			0.00	\$	-
5 Spoil	CY	\$	13.00			298518.52	\$	3,880,741			505185.19	\$	6,567,407
6 Landscape erosion Control	Acre	\$	6,144			15.66	\$	96,194			15.66	\$	96,194
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-			0.00	\$	-
8 Special Drainage Facilities	5% Earthwork						\$	292,665				\$	491,950
Structures, Tunnels, Walls													
1 Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$	-			0.00	\$	-
Standard Structure (4 tracks)	Mile	\$	52,459,008										
2 High Structure	Mile	\$	40,424,448				\$	-				\$	-
3 Long Span Structure	Mile	\$	61,919,232				\$	-				\$	-
4 Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-				\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$	-				\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-				\$	-
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-				\$	-
9 Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$	-				\$	-
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-				\$	-
Double Track TBM (<6 Miles)	Mile	\$	106,637,312										
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896										
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-				\$	-
12 Crossovers	ea	\$	442,368				\$	-				\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$	-			1.17	\$	154,114,715
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224			0.00	\$	-			0.00	\$	-
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336										
Trench Long (1 track) (1000 + ft)	Mile	\$	40,266,957										
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-				\$	-
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856										
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			1.17	\$	13,913,251			1.17	\$	13,913,251
17 Retaining Walls	Mile	\$	8,613,888			0.00	\$	-			0.00	\$	-
18 Containment Walls	Mile	\$	5,907,456				\$	-				\$	-
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080			1.17	\$	154,114,715				\$	-
Four Track Drill & Blast	Mile	\$	293,775,360				\$	-				\$	-
Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-				\$	-
Four Track TBM (<6 Miles)	Mile	\$	213,274,624										
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792										
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			0.00	\$	-
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114										
Grade Separations													
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-				\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528					-				\$	-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680					-				\$	-
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568					-				\$	-



COST ELEMENTS			UNIT	UNIT PRICE	Covered Trench (HST only) (1 Track)				Covered Trench (HST only) (2 Tracks)					
Subsection 2				Base: 2009 (3rd Quarter)	D				D					
					Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles			
Subsection Details							Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 843 + 00	End: 905 + 00	1.17 Miles			
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Single Track At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Single Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Single Track Tunnel (Mile)					Start: 843 + 00	End: 905 + 00	1.17 Miles		Start: 0 + 00		0.00 Miles			
Single Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$	-			\$	-	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-			\$	-	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$	-			\$	-	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-			\$	-	
7	Street Bridging HSR Trench	ea	\$	1,398,784			0	\$	-			0	\$	-
8	Minor Crossing Closures	ea	\$	87,040			1	\$	87,040			1	\$	87,040
Building Items														
1	Intermediate Passenger Stations	Each	\$	-				\$	-			\$	-	
1	Intermediate Passenger Stations (Millbrae)	Each	\$	12,562,617			0.5	\$	6,281,309			1	\$	12,562,617
2	Terminal Passenger Stations	Each	\$	-				\$	-			\$	-	
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$	-			\$	-	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-			\$	-	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-			\$	-	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-			\$	-	
3	Maintenance Facility	Each	\$	123,921,884				\$	-			\$	-	
4	Parking - Structures	space	\$	-				\$	-			\$	-	
5	Parking - At Grade	space	\$	-				\$	-			\$	-	
Rail & Utility Relocation														
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-			\$	-	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-			\$	-	
3	Single Track Removal	Mile	\$	130,048				\$	-			\$	-	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-			\$	-	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-			\$	-	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-			\$	-	
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-			\$	-	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-			\$	-	
ROW (Not Included)														
ROW required for each segment														
1	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-	
2	Urban	Acre	\$	1,371,510				\$	-			\$	-	
3	Dense Suburban	Acre	\$	908,134				\$	-			\$	-	
4	Suburban	Acre	\$	208,418				\$	-			\$	-	
5	Undeveloped	Acre	\$	3,642				\$	-			\$	-	
ROW required for Temp. Construction Easement														
1	Dense Urban	Acre						\$	-			\$	-	
2	Urban	Acre						\$	-			\$	-	
3	Dense Suburban	Acre						\$	-			\$	-	
4	Suburban	Acre						\$	-			\$	-	
5	Undeveloped	Acre						\$	-			\$	-	
Right-of-Way Required for Stations, Maintenance & Parking Facilities														
6	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-	
7	Urban	Acre	\$	1,371,510				\$	-			\$	-	
8	Dense Suburban	Acre	\$	908,134				\$	-			\$	-	
9	Suburban	Acre	\$	208,418				\$	-			\$	-	
10	Undeveloped	Acre	\$	3,642				\$	-			\$	-	
	Environmental Mitigation = 3% Line Costs							\$	5,499,056			\$	5,895,831	
System Elements														
1	Signaling (ATC)	Mile	\$	2,070,000			1.17	\$	2,430,682			1.17	\$	2,430,682
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.17	\$	634,091			1.17	\$	634,091
3	Wayside Protection System	Mile	\$	108,000			1.17	\$	126,818			1.17	\$	126,818
Electrification Items														
1	Traction Power supply	Mile	\$	1,170,000			1.17	\$	1,373,864			1.17	\$	1,373,864
2	Traction Power Distribution	Mile	\$	1,485,000			1.17	\$	1,743,750			1.17	\$	1,743,750
								\$	195,110,112			\$	208,732,740	
Program Implementation Costs (per screening)								\$	49,753,079					
Program Implementation Costs														
Contingencies (per screening) (25%)								\$	48,777,528					
Subtotal								\$	293,640,719					
Subtotal (Rounded)								\$	294,000,000					

\$ 314,000,000

Note: unit price for three track is interpolated from double and four tracks



Subsection 3	3A (0.8 miles)					3B (1.9 miles)				
	At Grade	Open Trench	Covered Trench/ Tunnel	Deep Tunnel (HST Only)	Hybrid	Aerial Viaduct	Open Trench	Covered Trench/ Tunnel	Deep Tunnel (HST Only)	Hybrid
Capital Cost (\$2009 in Millions) does not include ROW	\$12	\$99 (2 tracks); \$139 (4 tracks)	\$356	\$161	\$260-449	\$245	\$263 (2 tracks); \$413 (4 tracks)	\$937	\$403	\$666-1,171
Acquisition Cost of Permanent ROW	Highest	Medium	Lowest	Lowest	Lowest	Medium	Medium	Lowest	Lowest	Lowest
Notes:		<b>2 tracks -</b> <i>1. Must be combined with deep tunnel for a hybrid option.</i>		<b>2 tracks -</b> <i>1. Must be combined with 2 track trench for a hybrid option.</i>		1. Caltrain Broadway and Burlingame Stations	1. Caltrain Broadway and Burlingame Stations <b>2 tracks -</b> <i>1. Must be combined with deep tunnel for a hybrid option.</i>	1. Caltrain Broadway and Burlingame Stations	<b>2 tracks -</b> <i>1. Must be combined with 2 track trench for a hybrid option.</i>	1. Caltrain Broadway and Burlingame Stations



Subsection 3	3C & 3D (1.8 miles)					3E (0.5 miles)
	Aerial Viaduct	Open Trench	Covered Trench/ Tunnel	Deep Tunnel (HST Only)	Hybrid	At Grade
Capital Cost (\$2009 in Millions) does not include ROW	\$238	\$263 (2 tracks); \$405 (4 tracks)	\$894	\$213	\$645-1,116	\$30
Acquisition Cost of Permanent ROW	Medium	Medium	Lowest	Lowest	Lowest	Highest
Notes:	1. Caltrain San Mateo Station; 2. 9th Ave to be partially lowered.	1. Caltrain San Mateo Station; <b>2 tracks -</b> <i>1. Must be combined with deep tunnel for a hybrid option.</i>	1. Caltrain San Mateo Station	<b>2 tracks -</b> <i>1. Must be combined with 2 track trench for a hybrid option.</i>	1. Caltrain San Mateo Station	1. Caltrain Hayward Park Station



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)			
Subsection 3				Base: 2009 (3rd Quarter)	A				A				A				A			
					Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles	
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Single Track At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Freight Double Track - At Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Freight Single Track - At Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total																				
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00 \$	-			0.76 \$	3,560,727			0.00 \$	-			0.00 \$	-
Three Track - Total																				
5	Three Track Section - At Grade	Mile	\$	3,150,336			0 \$	-			0 \$	-			0 \$	-			0 \$	-
6	Three Track Section - On Structure	Mile	\$	7,050,240			0 \$	-			0 \$	-			0 \$	-			0 \$	-
7	Three Track Section - In Tunnel or Subway	Mile	\$	7,050,240			0 \$	-			0 \$	-			0 \$	-			0 \$	-
8	Three Track Section - In Trench	Mile	\$	7,050,240			0 \$	-			0 \$	-			0 \$	-			0 \$	-
Four Track Section - Total																				
	Four-track Section - At Grade	Mile	\$	4,200,448			0.76 \$	3,182,158			0.00 \$	-			0.00 \$	-			0.00 \$	-
	Four-Track Section - On Structure	Mile	\$	9,400,320			0 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0 \$	-			0.00 \$	-			0.00 \$	-			0.76 \$	7,121,455
	Four-Track Section - In Trench	Mile	\$	9,400,320			0 \$	-			0.00 \$	-			0.76 \$	7,121,455			0.00 \$	-
Single Track - Total																				
5	Single Track Section - At Grade	Mile	\$	1,549,312			0 \$	-			0 \$	-			0 \$	-			0 \$	-
6	Single Track Section - On Structure	Mile	\$	2,350,080			0 \$	-			0 \$	-			0 \$	-			0 \$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0 \$	-			0 \$	-			0 \$	-			0 \$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080			0 \$	-			0 \$	-			0 \$	-			0 \$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0 \$	-			0 \$	-			0 \$	-			0 \$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0 \$	-			0 \$	-			0 \$	-			0 \$	-
Earthwork Items																				
1	Site Preparation - Undeveloped	Acre	\$	9,216			10.10 \$	93,091			5.97 \$	55,008			10.10 \$	93,091			10.10 \$	93,091
2	Total Cut	CY	\$	6.00			0.00 \$	-			651851.85 \$	3,911,111			651851.85 \$	3,911,111			651851.85 \$	3,911,111
3	Total Fill	CY	\$	6.00			0.00 \$	-			0.00 \$	-			0.00 \$	-			325925.93 \$	1,955,556
4	Borrow	CY	\$	13.00			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-
5	Spoil	CY	\$	13.00			0.00 \$	-			651851.85 \$	8,474,074			651851.85 \$	8,474,074			325925.93 \$	4,237,037
6	Landscape erosion Control	Acre	\$	6,144			0.00 \$	-			0.00 \$	-			10.10 \$	62,061			0.00 \$	-
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.76 \$	109,382			0.00 \$	-			0.76 \$	109,382			0.00 \$	-
8	Special Drainage Facilities	5% Earthwork					\$	10,124			\$	622,010			\$	632,486			\$	509,840
Structures, Tunnels, Walls																				
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0 \$	-			0 \$	-			0 \$	-			0 \$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008																
2	High Structure	Mile	\$	40,424,448			\$	-			\$	-			\$	-			\$	-
3	Long Span Structure	Mile	\$	61,919,232			\$	-			\$	-			\$	-			\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208			\$	-			\$	-			\$	-			\$	-
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			\$	-			\$	-			\$	-			\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$	-			\$	-			\$	-			\$	-
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-			\$	-			\$	-			\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			\$	-			\$	-			\$	-			\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680			0 \$	-			0 \$	-			0 \$	-			0 \$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000			\$	-			\$	-			\$	-			\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-			\$	-			\$	-			\$	-
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896			\$	-			\$	-			\$	-			\$	-
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$	-			\$	-			\$	-			\$	-
12	Crossovers	ea	\$	442,368			\$	-			\$	-			\$	-			\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0 \$	-			0 \$	-			0 \$	-			0 \$	-
14	Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224			0 \$	-			0.76 \$	43,578,958			0.00 \$	-			0 \$	-
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336											0.76 \$	65,368,436				
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904			\$	-			\$	-			\$	-			\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0 \$	-			0 \$	-			0 \$	-			0.76 \$	8,976,291
17	Retaining Walls	Mile	\$	8,613,888			0 \$	-			0.00 \$	-			0.00 \$	-			0 \$	-
18	Containment Walls	Mile	\$	5,907,456			\$	-			0.00 \$	-			0.00 \$	-			\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080			\$	-			\$	-			\$	-			\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360			\$	-			\$	-			\$	-			\$	-
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000			\$	-			\$	-			\$	-			\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624			\$	-			\$	-			\$	-			\$	-
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792			\$	-			\$	-			\$	-			\$	-
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.76 \$	198,857,697
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																
Grade Separations																				



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (4 tracks)		Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)						
Subsection 3				Base: 2009 (3rd Quarter)	A		A				A				A						
					Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles		
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles		
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$ -				\$ -				\$ -				\$ -	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$ -				\$ -				\$ -				\$ -	
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$ -				\$ -				\$ -				\$ -	
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$ -				\$ -				\$ -				\$ -	
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$ -				\$ -				\$ -				\$ -	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$ -				\$ -				\$ -				\$ -	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$ -				\$ -				\$ -				\$ -	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$ -				\$ -				\$ -				\$ -	
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$ -				\$ -				\$ -				\$ -	
8	Minor Crossing Closures	ea	\$	87,040			1	\$ 87,040				\$ -				\$ -				\$ -	
Building Items																					
1	Intermediate Passenger Stations	Each	\$	-				\$ -				\$ -				\$ -				\$ -	
2	Terminal Passenger Stations	Each	\$	-				\$ -				\$ -				\$ -				\$ -	
	Caltrain Passenger Station - At-Grade	Each	\$	\$15,000,000				\$ -				\$ -				\$ -				\$ -	
	Caltrain Passenger Station - On Structure	Each	\$	\$15,000,000				\$ -				\$ -				\$ -				\$ -	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	\$15,000,000				\$ -				\$ -				\$ -				\$ -	
	Caltrain Passenger Station - In Trench	Each	\$	\$15,000,000				\$ -				\$ -				\$ -				\$ -	
3	Maintenance Facility	Each	\$	123,921,884				\$ -				\$ -				\$ -				\$ -	
4	Parking - Structures	space	\$	-				\$ -				\$ -				\$ -				\$ -	
5	Parking - At Grade	space	\$	-				\$ -				\$ -				\$ -				\$ -	
Rail & Utility Relocation																					
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -				\$ -				\$ -				\$ -	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$ -				\$ -				\$ -				\$ -	
3	Single Track Removal	Mile	\$	130,048				\$ -				\$ -				\$ -				\$ -	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$ -				\$ -				\$ -				\$ -	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$ -				\$ -				\$ -				\$ -	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$ -				\$ -				\$ -				\$ -	
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$ -				\$ -				\$ -				\$ -	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$ -				\$ -				\$ -				\$ -	
ROW (Not Included)																					
ROW required for each segment																					
1	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -				\$ -				\$ -	
2	Urban	Acre	\$	1,371,510				\$ -				\$ -				\$ -				\$ -	
3	Dense Suburban	Acre	\$	908,134				\$ -				\$ -				\$ -				\$ -	
4	Suburban	Acre	\$	208,418				\$ -				\$ -				\$ -				\$ -	
5	Undeveloped	Acre	\$	3,642				\$ -				\$ -				\$ -				\$ -	
ROW required for Temp. Construction Easement																					
1	Dense Urban	Acre						\$ -				\$ -				\$ -				\$ -	
2	Urban	Acre						\$ -				\$ -				\$ -				\$ -	
3	Dense Suburban	Acre						\$ -				\$ -				\$ -				\$ -	
4	Suburban	Acre						\$ -				\$ -				\$ -				\$ -	
5	Undeveloped	Acre						\$ -				\$ -				\$ -				\$ -	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																					
6	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -				\$ -				\$ -	
7	Urban	Acre	\$	1,371,510				\$ -				\$ -				\$ -				\$ -	
8	Dense Suburban	Acre	\$	908,134				\$ -				\$ -				\$ -				\$ -	
9	Suburban	Acre	\$	208,418				\$ -				\$ -				\$ -				\$ -	
10	Undeveloped	Acre	\$	3,642				\$ -				\$ -				\$ -				\$ -	
	Environmental Mitigation = 3% Line Costs							\$ 104,454				\$ 1,806,057				\$ 2,573,163				\$ 6,769,862	
System Elements																					
1	Signaling (ATC)	Mile	\$	2,070,000			0.76	\$ 1,568,182				0.76	\$ 1,568,182			0.76	\$ 1,568,182			0.76	\$ 1,568,182
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.76	\$ 409,091				0.76	\$ 409,091			0.76	\$ 409,091			0.76	\$ 409,091
3	Wayside Protection System	Mile	\$	108,000			0.76	\$ 81,818				0.76	\$ 81,818			0.76	\$ 81,818			0.76	\$ 81,818
Electrification Items																					
1	Traction Power supply	Mile	\$	1,170,000			0.76	\$ 886,364				0.76	\$ 886,364			0.76	\$ 886,364			0.76	\$ 886,364
2	Traction Power Distribution	Mile	\$	1,485,000			0.76	\$ 1,125,000				0.76	\$ 1,125,000			0.76	\$ 1,125,000			0.76	\$ 1,125,000
Program Implementation Costs (per screening)								\$ 7,656,702				\$ 66,078,399				\$ 92,415,713				\$ 236,502,394	
Program Implementation Costs								\$ 1,952,459				\$ 16,849,992				\$ 23,566,007				\$ 60,308,110	
Contingencies (per screening) (25%)								\$ 1,914,176				\$ 16,519,600				\$ 23,103,928				\$ 59,125,598	
Subtotal								\$ 11,523,337				\$ 99,447,991				\$ 139,085,648				\$ 355,936,102	
Subtotal (Rounded)								\$ 12,000,000				\$ 99,000,000				\$ 139,000,000				\$ 356,000,000	



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)							
Subsection 3			Base: 2009 (3rd Quarter)		A				A							
					Start: 905 + 00		End: 945 + 00		0.76 Miles		Start: 905 + 00		End: 945 + 00		0.76 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)						Start: 905 + 00	End: 945 + 00	0.76 Miles			Start: 905 + 00	End: 945 + 00	0.76 Miles			
Double Track Trench (Mile)						Start: 0 + 00		0.00 Miles			Start: 905 + 00	End: 945 + 00	0.76 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			
Single Track At-Grade (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Single Track Elevated (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Single Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Single Track Trench (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Freight Double Track - At Grade (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Freight Single Track - At Grade (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Double Track Section - Total																
1	Double Track Section - At Grade	Mile	\$	2,100,224				0.00	\$	-			0.00	\$	-	
2	Double Track Section - On Structure	Mile	\$	4,700,160				0.00	\$	-			0.00	\$	-	
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				0.76	\$	3,560,727			0.76	\$	3,560,727	
4	Double Track Section - In Trench	Mile	\$	4,700,160				0.00	\$	-			0.76	\$	3,560,727	
Three Track - Total																
5	Three Track Section - At Grade	Mile	\$	3,150,336				0	\$	-			0	\$	-	
6	Three Track Section - On structure	Mile	\$	7,050,240				0	\$	-			0	\$	-	
7	Three Track Section - In Tunnel or Subway	Mile	\$	7,050,240				0	\$	-			0	\$	-	
8	Three Track Section - In Trench	Mile	\$	7,050,240				0	\$	-			0	\$	-	
Four Track Section - Total																
	Four-track Section - At Grade	Mile	\$	4,200,448				0.00	\$	-			0.00	\$	-	
	Four-Track Section - On Structure	Mile	\$	9,400,320				0.00	\$	-			0.00	\$	-	
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0.00	\$	-			0.00	\$	-	
	Four-Track Section - In Trench	Mile	\$	9,400,320				0.00	\$	-			0.00	\$	-	
Single Track - Total																
5	Single Track Section - At Grade	Mile	\$	1,549,312				0	\$	-			0	\$	-	
6	Single Track Section - On structure	Mile	\$	2,350,080				0	\$	-			0	\$	-	
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0	\$	-			0	\$	-	
8	Single Track Section - In Trench	Mile	\$	2,350,080				0	\$	-			0	\$	-	
9	Freight Double Track - At Grade	Mile	\$	2,839,552				0	\$	-			0	\$	-	
10	Freight Single Track - At Grade	Mile	\$	1,549,312				0	\$	-			0	\$	-	
Earthwork Items																
1	Site Preparation - Undeveloped	Acre	\$	9,216				10.10	\$	93,091			16.07	\$	148,099	
2	Total Cut	CY	\$	6.00				325926	\$	1,955,556			1037037.04	\$	6,222,222	
3	Total Fill	CY	\$	6.00				0.00	\$	-			0.00	\$	-	
4	Borrow	CY	\$	13.00				0.00	\$	-			0.00	\$	-	
5	Spoil	CY	\$	13.00				325926	\$	4,237,037			1037037.04	\$	13,481,481	
6	Landscape erosion Control	Acre	\$	6,144				0.00	\$	-			0.00	\$	-	
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.00	\$	-			0.76	\$	109,382	
8	Special Drainage Facilities	5% Earthwork							\$	314,284				\$	998,059	
Structures, Tunnels, Walls																
1	Standard Structure (2 tracks)	Mile	\$	34,972,672				0	\$	-			0	\$	-	
	Standard Structure (4 tracks)	Mile	\$	52,459,008												
2	High Structure	Mile	\$	40,424,448					\$	-				\$	-	
3	Long Span Structure	Mile	\$	61,919,232					\$	-				\$	-	
4	Waterway Crossing - Primary	Mile	\$	85,342,208					\$	-				\$	-	
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408					\$	-				\$	-	
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264					\$	-				\$	-	
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312					\$	-				\$	-	
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896					\$	-				\$	-	
9	Double Track Drill & Blast	Mile	\$	146,887,680					\$	-				\$	-	
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000					\$	-				\$	-	
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312				0.76	\$	80,785,842						
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896												
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952					\$	-				\$	-	
12	Crossovers	ea	\$	442,368					\$	-				\$	-	
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080									0.00	\$	-	
14	Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224				0	\$	-			0	\$	-	
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336												
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904					\$	-				\$	-	
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856												
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				0.76	\$	8,976,291			0.76	\$	8,976,291	
17	Retaining Walls	Mile	\$	8,613,888				0	\$	-			0	\$	-	
18	Containment Walls	Mile	\$	5,907,456				0	\$	-			0	\$	-	
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080					\$	-				\$	-	
	Four Track Drill & Blast	Mile	\$	293,775,360					\$	-				\$	-	
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000					\$	-				\$	-	
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624												
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792												
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00	\$	-			0.00	\$	-	
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114									0.76	\$	248,879,632	
Grade Separations																



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)			
Subsection 3				Base: 2009 (3rd Quarter)	A				A			
					Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 905 + 00	End: 945 + 00	0.76 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 905 + 00	End: 945 + 00	0.76 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$ -				\$ -
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$ -				\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$ -				\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$ -				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$ -				\$ -
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$ -				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$ -				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$ -				\$ -
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$ -				\$ -
8	Minor Crossing Closures	ea	\$	87,040				\$ -				\$ -
Building Items												
1	Intermediate Passenger Stations	Each	\$	-				\$ -				\$ -
2	Terminal Passenger Stations	Each	\$	-				\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$	\$15,000,000				\$ -				\$ -
	Caltrain Passenger Station - On Structure	Each	\$	\$15,000,000				\$ -				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	\$15,000,000				\$ -				\$ -
	Caltrain Passenger Station - In Trench	Each	\$	\$15,000,000				\$ -				\$ -
3	Maintenance Facility	Each	\$	123,921,884				\$ -				\$ -
4	Parking - Structures	space	\$	-				\$ -				\$ -
5	Parking - At Grade	space	\$	-				\$ -				\$ -
Rail & Utility Relocation												
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -				\$ -
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$ -				\$ -
3	Single Track Removal	Mile	\$	130,048				\$ -				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$ -				\$ -
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$ -				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$ -				\$ -
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$ -				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$ -				\$ -
ROW (Not Included)												
ROW required for each segment												
1	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -
2	Urban	Acre	\$	1,371,510				\$ -				\$ -
3	Dense Suburban	Acre	\$	908,134				\$ -				\$ -
4	Suburban	Acre	\$	208,418				\$ -				\$ -
5	Undeveloped	Acre	\$	3,642				\$ -				\$ -
ROW required for Temp. Construction Easement												
1	Dense Urban	Acre						\$ -				\$ -
2	Urban	Acre						\$ -				\$ -
3	Dense Suburban	Acre						\$ -				\$ -
4	Suburban	Acre						\$ -				\$ -
5	Undeveloped	Acre						\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities												
6	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -
7	Urban	Acre	\$	1,371,510				\$ -				\$ -
8	Dense Suburban	Acre	\$	908,134				\$ -				\$ -
9	Suburban	Acre	\$	208,418				\$ -				\$ -
10	Undeveloped	Acre	\$	3,642				\$ -				\$ -
Environmental Mitigation = 3% Line Costs								\$ 2,997,685				\$ 8,578,099
System Elements												
1	Signaling (ATC)	Mile	\$	2,070,000			0.76	\$ 1,568,182			0.76	\$ 1,568,182
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.76	\$ 409,091			0.76	\$ 409,091
3	Wayside Protection System	Mile	\$	108,000			0.76	\$ 81,818			0.76	\$ 81,818
Electrification Items												
1	Traction Power supply	Mile	\$	1,170,000			0.76	\$ 886,364			0.76	\$ 886,364
2	Traction Power Distribution	Mile	\$	1,485,000			0.76	\$ 1,125,000			0.76	\$ 1,125,000
Subtotal								\$ 106,990,968				\$ 298,585,174
Program Implementation Costs (per screening)								\$ 27,282,697				\$ 76,139,219
Program Implementation Costs												
Contingencies (per screening) (25%)								\$ 26,747,742				\$ 74,646,294
Subtotal								\$ 161,021,406				\$ 449,370,687
Subtotal (Rounded)								\$ 161,000,000				\$ 449,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)					
Subsection 3				Base: 2009 (3rd Quarter)	B				B				B				B					
					Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles			
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles			Start: 945 + 00	End: 1045 + 00	1.89 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 945 + 00	End: 1045 + 00	1.89 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 945 + 00	End: 1045 + 00	1.89 Miles
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 945 + 00	End: 1045 + 00	1.89 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles
Single Track At-Grade (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Single Track Elevated (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles
Single Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles
Single Track Trench (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles
Freight Double Track - At Grade (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Freight Single Track - At Grade (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles
Double Track Section - Total																						
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$	-			0.00	\$	-			0.00	\$	-			
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-			
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-			
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-			1.89	\$	8,901,818			0.00	\$	-			
Four Track Section - Total																						
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-			0.00	\$	-			0.00	\$	-			
	Four-Track Section - On Structure	Mile	\$	9,400,320			1.89	\$	17,803,636			0.00	\$	-			0.00	\$	-			
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$	-			0.00	\$	-			0.00	\$	-			
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$	-			0.00	\$	-			1.89	\$	17,803,636			
Single Track - Total																	0.00	\$	-			
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-			
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-			
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-			
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-			
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-			0	\$	-			0	\$	-			
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-			
Earthwork Items																						
1	Site Preparation - Undeveloped	Acre	\$	9,216			25.25	\$	232,727			14.92	\$	137,521			25.25	\$	232,727			
2	Total Cut	CY	\$	6.00			0	\$	-			0.00	\$	-			1629629.63	\$	9,777,778			
3	Total Fill	CY	\$	6.00			0	\$	-			0.00	\$	-			0.00	\$	-			
4	Borrow	CY	\$	13.00			0.00	\$	-			0.00	\$	-			0.00	\$	-			
5	Spoil	CY	\$	13.00			0.00	\$	-			0.00	\$	-			1629629.63	\$	21,185,185			
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$	-			0.00	\$	-			25.25	\$	155,152			
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-			0.00	\$	-			1.89	\$	273,455			
8	Special Drainage Facilities	5% Earthwork						\$	11,636				\$	6,876				\$	1,581,215			
Structures, Tunnels, Walls																						
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$	-			0	\$	-			0	\$	-			
	Standard Structure (4 tracks)	Mile	\$	52,459,008			1.89	\$	99,354,182				\$	-				\$	-			
2	High Structure	Mile	\$	40,424,448				\$	-				\$	-				\$	-			
3	Long Span Structure	Mile	\$	61,919,232				\$	-				\$	-				\$	-			
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-				\$	-				\$	-			
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.01	\$	697,344			0.01	\$	697,344			0.01	\$	697,344			
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-				\$	-				\$	-			
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-				\$	-			
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-				\$	-				\$	-			
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$	-			0	\$	-			0	\$	-			
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-				\$	-				\$	-			
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-				\$	-			
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896				\$	-				\$	-				\$	-			
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-				\$	-				\$	-			
12	Crossovers	ea	\$	442,368				\$	-				\$	-				\$	-			
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$	-			0	\$	-			0	\$	-			
14	Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224			0.00	\$	-			1.89	\$	108,947,394			0.00	\$	-			
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336								0.00	\$	-			1.89	\$	163,421,091			
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-				\$	-				\$	-			
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																		
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				\$	-			0.00	\$	-			0.00	\$	-			
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$	-			0.00	\$	-			0.00	\$	-			
18	Containment Walls	Mile	\$	5,907,456				\$	-			0.00	\$	-				\$	-			
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-				\$	-				\$	-			
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-				\$	-				\$	-			
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-				\$	-				\$	-			
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624																		
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792																		
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			0.00	\$	-			0.00	\$	-			
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																		
Grade Separations																						



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)					
Subsection 3			Base: 2009 (3rd Quarter)	B				B				B				B						
				Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles				
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Elevated (Mile)				Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles				
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-		\$	-				\$	-		\$	-			
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$	-		\$	-				\$	-		\$	-			
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	-		\$	-				\$	-		\$	-			
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-		\$	-				\$	-		\$	-			
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$	-		\$	-				\$	-		\$	-			
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-		\$	-				\$	-		\$	-			
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$	-		\$	-				\$	-		\$	-			
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-		\$	-				\$	-		\$	-			
7 Street Bridging HSR Trench	ea	\$	1,398,784				\$	-		8	\$ 11,190,272		8	\$ 11,190,272			0	\$	-			
8 Minor Crossing Closures	ea	\$	87,040				\$	-		\$	-				\$	-		0	\$	-		
Building Items																						
1 Intermediate Passenger Stations	Each	\$	-				\$	-		\$	-				\$	-		\$	-			
2 Terminal Passenger Stations			Each	\$	-		\$	-		\$	-				\$	-		\$	-			
Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$	-		\$	-				\$	-		\$	-			
Caltrain Passenger Station - On Structure	Each	\$	15,000,000			2	\$ 30,000,000			\$	-				\$	-		\$	-			
Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-		\$	-				\$	-		\$	-			
Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-		2	\$ 30,000,000		2	\$ 30,000,000			2	\$ 30,000,000				
3 Maintenance Facility	Each	\$	123,921,884				\$	-		\$	-				\$	-		\$	-			
4 Parking - Structures	space	\$	-				\$	-		\$	-				\$	-		\$	-			
5 Parking - At Grade	space	\$	-				\$	-		\$	-				\$	-		\$	-			
Rail & Utility Relocation																						
1 Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-		\$	-				\$	-		\$	-			
2 Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-		\$	-				\$	-		\$	-			
3 Single Track Removal			Mile	\$	130,048		\$	-		\$	-				\$	-		\$	-			
4 Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-		\$	-				\$	-		\$	-			
5 Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-		\$	-				\$	-		\$	-			
6 Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-		\$	-				\$	-		\$	-			
7 Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-		\$	-				\$	-		\$	-			
8 Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-		\$	-				\$	-		\$	-			
ROW (Not Included)																						
ROW required for each segment																						
1 Dense Urban	Acre	\$	2,786,321				\$	-		\$	-				\$	-		\$	-			
2 Urban	Acre	\$	1,371,510				\$	-		\$	-				\$	-		\$	-			
3 Dense Suburban	Acre	\$	908,134				\$	-		\$	-				\$	-		\$	-			
4 Suburban	Acre	\$	208,418				\$	-		\$	-				\$	-		\$	-			
5 Undeveloped	Acre	\$	3,642				\$	-		\$	-				\$	-		\$	-			
ROW required for Temp. Construction Easement																						
1 Dense Urban	Acre						\$	-		\$	-				\$	-		\$	-			
2 Urban	Acre						\$	-		\$	-				\$	-		\$	-			
3 Dense Suburban	Acre						\$	-		\$	-				\$	-		\$	-			
4 Suburban	Acre						\$	-		\$	-				\$	-		\$	-			
5 Undeveloped	Acre						\$	-		\$	-				\$	-		\$	-			
Right-of-Way Required for Stations, Maintenance & Parking Facilities																						
6 Dense Urban	Acre	\$	2,786,321				\$	-		\$	-				\$	-		\$	-			
7 Urban	Acre	\$	1,371,510				\$	-		\$	-				\$	-		\$	-			
8 Dense Suburban	Acre	\$	908,134				\$	-		\$	-				\$	-		\$	-			
9 Suburban	Acre	\$	208,418				\$	-		\$	-				\$	-		\$	-			
10 Undeveloped	Acre	\$	3,642				\$	-		\$	-				\$	-		\$	-			
Environmental Mitigation = 3% Line Costs							\$	4,442,986			\$	4,796,437			\$	7,689,536			\$	17,845,576		
System Elements																						
1 Signaling (ATC)	Mile	\$	2,070,000			1.89	\$	3,920,455			1.89	\$	3,920,455			1.89	\$	3,920,455		1.89	\$	3,920,455
2 Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.89	\$	1,022,727			1.89	\$	1,022,727			1.89	\$	1,022,727		1.89	\$	1,022,727
3 Wayside Protection System	Mile	\$	108,000			1.89	\$	204,545			1.89	\$	204,545			1.89	\$	204,545		1.89	\$	204,545
Electrification Items																						
1 Traction Power supply	Mile	\$	1,170,000			1.89	\$	2,215,909			1.89	\$	2,215,909			1.89	\$	2,215,909		1.89	\$	2,215,909
2 Traction Power Distribution	Mile	\$	1,485,000			1.89	\$	2,812,500			1.89	\$	2,812,500			1.89	\$	2,812,500		1.89	\$	2,812,500
Program Implementation Costs (per screening)							\$	162,718,648			\$	174,853,798			\$	274,183,526			\$	622,874,248		
Program Implementation Costs							\$	41,493,255			\$	44,587,718			\$	69,916,799			\$	158,832,933		
Contingencies (per screening) (25%)							\$	40,679,662			\$	43,713,449			\$	68,545,882			\$	155,718,562		
Subtotal							\$	244,891,565			\$	263,154,966			\$	412,646,207			\$	937,425,744		
Subtotal (Rounded)							\$	245,000,000			\$	263,000,000			\$	413,000,000			\$	937,000,000		



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)							
Subsection 3				Base: 2009 (3rd Quarter)	B				B							
					Start: 945 + 00		End: 1045 + 00		1.89 Miles		Start: 945 + 00		End: 1045 + 00		1.89 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles					
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Double Track Tunnel (Mile)					Start: 945 + 00	End: 1045 + 00	1.89 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles					
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 945 + 00	End: 1045 + 00	1.89 Miles					
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles					
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles					
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles					
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles					
Single Track At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Single Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Single Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Single Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Freight Double Track - At Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Freight Single Track - At Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Double Track Section - Total																
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$	-		0.00	\$	-			
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	-		0.00	\$	-			
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			1.89	\$	8,901,818		1.89	\$	8,901,818			
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-		1.89	\$	8,901,818			
Four Track Section - Total																
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-		0.00	\$	-			
	Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$	-		0.00	\$	-			
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$	-		0.00	\$	-			
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$	-		0.00	\$	-			
Single Track - Total																
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-		0	\$	-			
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-		0	\$	-			
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-		0	\$	-			
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-		0	\$	-			
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-		0	\$	-			
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-		0	\$	-			
Earthwork Items																
1	Site Preparation - Undeveloped	Acre	\$	9,216				\$	-		40.17	\$	370,248			
2	Total Cut	CY	\$	6.00		814814.81		\$	4,888,889		2592592.59	\$	15,555,556			
3	Total Fill	CY	\$	6.00				\$	-		0.00	\$	-			
4	Borrow	CY	\$	13.00				0.00	\$	-	0.00	\$	-			
5	Spoil	CY	\$	13.00		814814.81		\$	10,592,593		2592592.59	\$	33,703,704			
6	Landscape erosion Control	Acre	\$	6,144				0	\$	-	0.00	\$	-			
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.00	\$	-	1.89	\$	273,455			
8	Special Drainage Facilities	5% Earthwork						\$	774,074			\$	2,495,148			
Structures, Tunnels, Walls																
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0	\$	-		0	\$	-			
	Standard Structure (4 tracks)	Mile	\$	52,459,008												
2	High Structure	Mile	\$	40,424,448				\$	-		\$	-				
3	Long Span Structure	Mile	\$	61,919,232				\$	-		\$	-				
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-		\$	-				
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408		0.01		\$	697,344		0.01	\$	697,344			
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-		\$	-				
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-		\$	-				
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-		\$	-				
9	Double Track Drill & Blast	Mile	\$	146,887,680				\$	-		\$	-				
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-		\$	-				
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312		1.89		\$	201,964,606							
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896												
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-		\$	-				
12	Crossovers	ea	\$	442,368				\$	-		\$	-				
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				\$	-		0.00	\$	-			
14	Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224		0.00		\$	-		0	\$	-			
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336												
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-		\$	-				
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856												
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704		1.89		\$	22,440,727		1.89	\$	22,440,727			
17	Retaining Walls	Mile	\$	8,613,888		0.00		\$	-		0	\$	-			
18	Containment Walls	Mile	\$	5,907,456				\$	-		0	\$	-			
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-		\$	-				
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-		\$	-				
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-		\$	-				
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624												
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792												
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160		0.00		\$	-		0.00	\$	-			
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114							1.89	\$	622,199,080			
Grade Separations																



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)						
Subsection 3			Base: 2009 (3rd Quarter)	B				B							
				Start: 945 + 00		End: 1045 + 00		1.89 Miles		Start: 945 + 00		End: 1045 + 00		1.89 Miles	
Subsection Details						Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)						0.00 Miles				0.00 Miles					
Double Track Elevated (Mile)						0.00 Miles				0.00 Miles					
Double Track Tunnel (Mile)						1.89 Miles				1.89 Miles					
Double Track Trench (Mile)						0.00 Miles				1.89 Miles					
Four Track Construction/Reconstruction At-Grade (Mile)						0.00 Miles				0.00 Miles					
Four Track Elevated (Mile)						0.00 Miles				0.00 Miles					
Four Track Tunnel (Mile)						0.00 Miles				0.00 Miles					
Four Track Trench (Mile)						0.00 Miles				0.00 Miles					
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-			\$	-		
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$	-			\$	-		
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	-			\$	-		
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-			\$	-		
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$	-			\$	-		
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-			\$	-		
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$	-			\$	-		
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-			\$	-		
7	Street Bridging HSR Trench	ea	\$	1,398,784			0	\$	-			\$	-		
8	Minor Crossing Closures	ea	\$	87,040			0	\$	-			\$	-		
Building Items															
1	Intermediate Passenger Stations	Each	\$	-				\$	-			\$	-		
2	Terminal Passenger Stations	Each	\$	-				\$	-			\$	-		
	Caltrain Passenger Station - At-Grade	Each	\$	\$15,000,000				\$	-			\$	-		
	Caltrain Passenger Station - On Structure	Each	\$	\$15,000,000				\$	-			\$	-		
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	\$15,000,000				\$	-			\$	-		
	Caltrain Passenger Station - In Trench	Each	\$	\$15,000,000			0	\$	-		2	\$	30,000,000		
3	Maintenance Facility	Each	\$	123,921,884				\$	-			\$	-		
4	Parking - Structures	space	\$	-				\$	-			\$	-		
5	Parking - At Grade	space	\$	-				\$	-			\$	-		
Rail & Utility Relocation															
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-			\$	-		
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-			\$	-		
3	Single Track Removal	Mile	\$	130,048				\$	-			\$	-		
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-			\$	-		
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-			\$	-		
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-			\$	-		
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-			\$	-		
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-			\$	-		
ROW (Not Included)															
ROW required for each segment															
1	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-		
2	Urban	Acre	\$	1,371,510				\$	-			\$	-		
3	Dense Suburban	Acre	\$	908,134				\$	-			\$	-		
4	Suburban	Acre	\$	208,418				\$	-			\$	-		
5	Undeveloped	Acre	\$	3,642				\$	-			\$	-		
ROW required for Temp. Construction Easement															
1	Dense Urban	Acre						\$	-			\$	-		
2	Urban	Acre						\$	-			\$	-		
3	Dense Suburban	Acre						\$	-			\$	-		
4	Suburban	Acre						\$	-			\$	-		
5	Undeveloped	Acre						\$	-			\$	-		
Right-of-Way Required for Stations, Maintenance & Parking Facilities															
6	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-		
7	Urban	Acre	\$	1,371,510				\$	-			\$	-		
8	Dense Suburban	Acre	\$	908,134				\$	-			\$	-		
9	Suburban	Acre	\$	208,418				\$	-			\$	-		
10	Undeveloped	Acre	\$	3,642				\$	-			\$	-		
Environmental Mitigation = 3% Line Costs								\$	7,507,802			\$	22,366,167		
System Elements															
1	Signaling (ATC)	Mile	\$	2,070,000			1.89	\$	3,920,455			1.89	\$	3,920,455	
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.89	\$	1,022,727			1.89	\$	1,022,727	
3	Wayside Protection System	Mile	\$	108,000			1.89	\$	204,545			1.89	\$	204,545	
Electrification Items															
1	Traction Power supply	Mile	\$	1,170,000			1.89	\$	2,215,909			1.89	\$	2,215,909	
2	Traction Power Distribution	Mile	\$	1,485,000			1.89	\$	2,812,500			1.89	\$	2,812,500	
Subtotal								\$	267,943,989			\$	778,081,200		
Program Implementation Costs (per screening)								\$	68,325,717			\$	198,410,706		
Program Implementation Costs															
Contingencies (per screening) (25%)								\$	66,985,997			\$	194,520,300		
Subtotal								\$	403,255,703	\$				1,171,012,206	
Subtotal (Rounded)								\$	403,000,000	\$				1,171,000,000	



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)			
Subsection 3				Base: 2009 (3rd Quarter)	C				C				C			
					Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles	
Double Track Section - Total																
1 Double Track Section - At Grade	Mile	\$	2,100,224				0.00	\$ -			0.00	\$ -			0.00	\$ -
2 Double Track Section - On Structure	Mile	\$	4,700,160				0.00	\$ -			0.00	\$ -			0.00	\$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				0.00	\$ -			0.00	\$ -			0.00	\$ -
4 Double Track Section - In Trench	Mile	\$	4,700,160				0.00	\$ -			0.80	\$ 3,738,764			0.00	\$ -
Four Track Section - Total																
Four-track Section - At Grade	Mile	\$	4,200,448				0.00	\$ -			0.00	\$ -			0.00	\$ -
Four-Track Section - On Structure	Mile	\$	9,400,320				0.80	\$ 7,477,527			0.00	\$ -			0.00	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0.00	\$ -			0.00	\$ -			0.00	\$ -
Four-Track Section - In Trench	Mile	\$	9,400,320				0.00	\$ -			0.00	\$ -			0.80	\$ 7,477,527
Single Track - Total																
5 Single Track Section - At Grade	Mile	\$	1,549,312				0.00	\$ -			0	\$ -			0	\$ -
6 Single Track Section - On structure	Mile	\$	2,350,080				0.00	\$ -			0	\$ -			0	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0.00	\$ -			0	\$ -			0	\$ -
8 Single Track Section - In Trench	Mile	\$	2,350,080				0.00	\$ -			0	\$ -			0	\$ -
9 Freight Double Track - At Grade	Mile	\$	2,839,552				0.00	\$ -			0	\$ -			0	\$ -
10 Freight Single Track - At Grade	Mile	\$	1,549,312				0.00	\$ -			0	\$ -			0	\$ -
Earthwork Items																
1 Site Preparation - Undeveloped	Acre	\$	9,216				10.61	\$ 97,745			6.27	\$ 57,759			10.61	\$ 97,745
2 Total Cut	CY	\$	6.00				0.00	\$ -			0.00	\$ -			684444.44	\$ 4,106,667
3 Total Fill	CY	\$	6.00				0.00	\$ -			0.00	\$ -			0.00	\$ -
4 Borrow	CY	\$	13.00				0.00	\$ -			0.00	\$ -			0.00	\$ -
5 Spoil	CY	\$	13.00				0.00	\$ -			0.00	\$ -			684444.44	\$ 8,897,778
6 Landscape erosion Control	Acre	\$	6,144				0.00	\$ -			0.00	\$ -			10.61	\$ 65,164
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.00	\$ -			0.00	\$ -			0.80	\$ 114,851
8 Special Drainage Facilities	5% Earthwork						\$	4,887			\$	2,888			\$	664,110
Structures, Tunnels, Walls																
1 Standard Structure (2 tracks)	Mile	\$	34,972,672				0.00	\$ -			0	\$ -			0	\$ -
Standard Structure (4 tracks)	Mile	\$	52,459,008				0.80	\$ 41,728,756								
2 High Structure	Mile	\$	40,424,448				\$	-			\$	-			\$	-
3 Long Span Structure	Mile	\$	61,919,232				\$	-			\$	-			\$	-
4 Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-			\$	-			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$	-			0.01	\$ 697,344			0.01	\$ 697,344
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-			\$	-			\$	-
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-			\$	-			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-			\$	-			\$	-
9 Double Track Drill & Blast	Mile	\$	146,887,680				0.00	\$ -			0	\$ -			0	\$ -
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-			\$	-			\$	-
Double Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-			\$	-			\$	-
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896				\$	-			\$	-			\$	-
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-			\$	-			\$	-
12 Crossovers	ea	\$	442,368				\$	-			\$	-			\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				0.00	\$ -			0	\$ -			0	\$ -
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224				0.00	\$ -			0.80	\$ 45,757,905			0.00	\$ -
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336								0.00	\$ -			0.80	\$ 68,636,858
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-			\$	-			\$	-
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856				\$	-			\$	-			\$	-
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				\$	-			0.00	\$ -			0.00	\$ -
17 Retaining Walls	Mile	\$	8,613,888				0.00	\$ -			0.00	\$ -			0.00	\$ -
18 Containment Walls	Mile	\$	5,907,456				\$	-			0.00	\$ -			0.00	\$ -
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-			\$	-			\$	-
Four Track Drill & Blast	Mile	\$	293,775,360				\$	-			\$	-			\$	-
Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-			\$	-			\$	-
Four Track TBM (<6 Miles)	Mile	\$	213,274,624				\$	-			\$	-			\$	-
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792				\$	-			\$	-			\$	-
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00	\$ -			0.00	\$ -			0.00	\$ -
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114													
Grade Separations																
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-			\$	-			\$	-



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (4 tracks)			Open Trench (2 tracks)				Open Trench (4 tracks)					
Subsection 3				Base: 2009 (3rd Quarter)	C			C				C					
					Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles		
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)					Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles		
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			\$	-			\$	-			\$	-	
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			\$	-			\$	-			\$	-	
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	-			\$	-			\$	-	
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			\$	-			\$	-			\$	-	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			\$	-			\$	-			\$	-	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			\$	-			\$	-			\$	-	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328			\$	-			\$	-			\$	-	
7	Street Bridging HSR Trench	ea	\$	1,398,784			\$	-			6	\$	8,392,704		6	\$	8,392,704
8	Minor Crossing Closures	ea	\$	87,040			\$	-			\$	-			\$	-	
Building Items																	
1	Intermediate Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-	
2 Terminal Passenger Stations							\$	-			\$	-			\$	-	
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000			\$	-			\$	-			\$	-	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000		1	\$	15,000,000			\$	-			\$	-	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000			\$	-			\$	-			\$	-	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000			\$	-		1	\$	15,000,000		1	\$	15,000,000	
3	Maintenance Facility	Each	\$	123,921,884			\$	-			\$	-			\$	-	
4	Parking - Structures	space	\$	-			\$	-			\$	-			\$	-	
5	Parking - At Grade	space	\$	-			\$	-			\$	-			\$	-	
Rail & Utility Relocation																	
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896			\$	-			\$	-			\$	-	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896			\$	-			\$	-			\$	-	
3 Single Track Removal							\$	-			\$	-			\$	-	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288			\$	-			\$	-			\$	-	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416			\$	-			\$	-			\$	-	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168			\$	-			\$	-			\$	-	
7	Major Utility Relocations - Suburban	Mile	\$	464,896			\$	-			\$	-			\$	-	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720			\$	-			\$	-			\$	-	
ROW (Not Included)																	
ROW required for each segment																	
1	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-	
2	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-	
3	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-	
4	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-	
5	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-	
ROW required for Temp. Construction Easement																	
1	Dense Urban	Acre					\$	-			\$	-			\$	-	
2	Urban	Acre					\$	-			\$	-			\$	-	
3	Dense Suburban	Acre					\$	-			\$	-			\$	-	
4	Suburban	Acre					\$	-			\$	-			\$	-	
5	Undeveloped	Acre					\$	-			\$	-			\$	-	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																	
6	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-	
7	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-	
8	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-	
9	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-	
10	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-	
Environmental Mitigation = 3% Line Costs							\$	1,929,267			\$	2,209,421			\$	3,424,522	
System Elements																	
1	Signaling (ATC)	Mile	\$	2,070,000		0.80	\$	1,646,591			0.80	\$	1,646,591		0.80	\$	1,646,591
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000		0.80	\$	429,545			0.80	\$	429,545		0.80	\$	429,545
3	Wayside Protection System	Mile	\$	108,000		0.80	\$	85,909			0.80	\$	85,909		0.80	\$	85,909
Electrification Items																	
1	Traction Power supply	Mile	\$	1,170,000		0.80	\$	930,682			0.80	\$	930,682		0.80	\$	930,682
2	Traction Power Distribution	Mile	\$	1,485,000		0.80	\$	1,181,250			0.80	\$	1,181,250		0.80	\$	1,181,250
Program Implementation Costs (per screening)							\$	70,512,161			\$	80,130,762			\$	121,849,248	
Program Implementation Costs							\$	17,980,601			\$	20,433,344			\$	31,071,558	
Contingencies (per screening) (25%)							\$	17,628,040			\$	20,032,690			\$	30,462,312	
	Subtotal						\$	106,120,802			\$	120,596,797			\$	183,383,118	
	Subtotal (Rounded)						\$	106,000,000			\$	121,000,000			\$	183,000,000	



COST ELEMENTS		UNIT	UNIT PRICE	Covered Trench (4 tracks)				Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)			
Subsection 3			Base: 2009 (3rd Quarter)	C				C				C			
				Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles	
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles	
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)				Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total						0.00				0.00				0.00	
1 Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$ -			0.00	\$ -			0.00	\$ -
2 Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$ -			0.80	\$ 3,738,764			0.80	\$ 3,738,764
4 Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.80	\$ 3,738,764
														0	\$ -
														0	\$ -
														0	\$ -
														0	\$ -
Four Track Section - Total															
Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$ -			0.00	\$ -			0.00	\$ -
Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$ -			0.00	\$ -			0.00	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.80	\$ 7,477,527			0.00	\$ -			0.00	\$ -
Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$ -			0.00	\$ -			0.00	\$ -
Single Track - Total															
5 Single Track Section - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -
6 Single Track Section - On structure	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -
8 Single Track Section - In Trench	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -
9 Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$ -			0	\$ -			0	\$ -
10 Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -
Earthwork Items															
1 Site Preparation - Undeveloped	Acre	\$	9,216			10.61	\$ 97,745				\$ -			16.87	\$ 155,504
2 Total Cut	CY	\$	6.00			684444.44	\$ 4,106,667			342222.22	\$ 2,053,333			1088888.89	\$ 6,533,333
3 Total Fill	CY	\$	6.00			342222.22	\$ 2,053,333			0	\$ -			0.00	\$ -
4 Borrow	CY	\$	13.00			0.00	\$ -			0.00	\$ -			0.00	\$ -
5 Spoil	CY	\$	13.00			342222.22	\$ 4,448,889			342222.22	\$ 4,448,889			1088888.89	\$ 14,155,556
6 Landscape erosion Control	Acre	\$	6,144			0.00	\$ -			0	\$ -			0.00	\$ -
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$ -			0.00	\$ -			0.80	\$ 114,851
8 Special Drainage Facilities	5% Earthwork						\$ 535,332				\$ 325,111				\$ 1,047,962
Structures, Tunnels, Walls															
1 Standard Structure (2 tracks)	Mile	\$	34,972,672			0	\$ -			0	\$ -			0	\$ -
Standard Structure (4 tracks)	Mile	\$	52,459,008												
2 High Structure	Mile	\$	40,424,448				\$ -				\$ -				\$ -
3 Long Span Structure	Mile	\$	61,919,232				\$ -				\$ -				\$ -
4 Waterway Crossing - Primary	Mile	\$	85,342,208				\$ -				\$ -				\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.01	\$ 697,344				\$ -			0.01	\$ 697,344
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$ -				\$ -				\$ -
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$ -				\$ -				\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$ -				\$ -				\$ -
9 Double Track Drill & Blast	Mile	\$	146,887,680			0	\$ -				\$ -				\$ -
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$ -				\$ -				\$ -
Double Track TBM (<6 Miles)	Mile	\$	106,637,312							0.80	\$ 84,825,135				
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896												
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$ -				\$ -				\$ -
12 Crossovers	ea	\$	442,368				\$ -				\$ -				\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0	\$ -				\$ -			0.00	\$ -
14 Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224			0.00	\$ -			0.00	\$ -			0	\$ -
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336												
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$ -				\$ -				\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856												
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0.80	\$ 9,425,105			0.80	\$ 9,425,105			0.80	\$ 9,425,105
17 Retaining Walls	Mile	\$	8,613,888			0.00	\$ -			0.00	\$ -			0	\$ -
18 Containment Walls	Mile	\$	5,907,456				\$ -				\$ -			0	\$ -
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$ -				\$ -				\$ -
Four Track Drill & Blast	Mile	\$	293,775,360				\$ -				\$ -				\$ -
Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$ -				\$ -				\$ -
Four Track TBM (<6 Miles)	Mile	\$	213,274,624												
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792												
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.80	\$ 208,800,582			0.00	\$ -			0.00	\$ -
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114											0.80	\$ 261,323,613
Grade Separations															
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$ -				\$ -				\$ -



COST ELEMENTS		UNIT	UNIT PRICE	Covered Trench (4 tracks)				Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)			
Subsection 3			Base: 2009 (3rd Quarter)	C				C				C			
				Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles	
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles	
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1045 + 00	End: 1087 + 00	0.80 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)				Start: 1045 + 00	End: 1087 + 00	0.80 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$ -				\$ -				\$ -
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$ -				\$ -				\$ -
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$ -				\$ -				\$ -
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$ -				\$ -				\$ -
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$ -				\$ -				\$ -
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$ -				\$ -				\$ -
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$ -				\$ -				\$ -
7 Street Bridging HSR Trench	ea	\$	1,398,784				\$ -			0 \$	\$ -				\$ -
8 Minor Crossing Closures	ea	\$	87,040				\$ -			0 \$	\$ -				\$ -
Building Items															
1 Intermediate Passenger Stations	Each	\$	-				\$ -				\$ -				\$ -
2 Terminal Passenger Stations															
Caltrain Passenger Station - At-Grade	Each	\$	-				\$ -				\$ -				\$ -
Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$ -				\$ -				\$ -
Caltrain Passenger Station - In Trench	Each	\$	15,000,000			1	\$ 15,000,000				\$ -			1	\$ 15,000,000
3 Maintenance Facility	Each	\$	123,921,884				\$ -				\$ -				\$ -
4 Parking - Structures	space	\$	-				\$ -				\$ -				\$ -
5 Parking - At Grade	space	\$	-				\$ -				\$ -				\$ -
Rail & Utility Relocation															
1 Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -				\$ -				\$ -
2 Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$ -				\$ -				\$ -
3 Single Track Removal															
4 Major Utility Relocations - Dense Urban	Mile	\$	130,048				\$ -				\$ -				\$ -
5 Major Utility Relocations - Urban	Mile	\$	1,548,288				\$ -				\$ -				\$ -
6 Major Utility Relocations - Dense Suburban	Mile	\$	1,084,416				\$ -				\$ -				\$ -
7 Major Utility Relocations - Suburban	Mile	\$	775,168				\$ -				\$ -				\$ -
8 Major Utility Relocations - Undeveloped	Mile	\$	464,896				\$ -				\$ -				\$ -
ROW (Not Included)															
ROW required for each segment															
1 Dense Urban	Acre	\$	2,786,321				\$ -				\$ -				\$ -
2 Urban	Acre	\$	1,371,510				\$ -				\$ -				\$ -
3 Dense Suburban	Acre	\$	908,134				\$ -				\$ -				\$ -
4 Suburban	Acre	\$	208,418				\$ -				\$ -				\$ -
5 Undeveloped	Acre	\$	3,642				\$ -				\$ -				\$ -
ROW required for Temp. Construction Easement															
1 Dense Urban	Acre						\$ -				\$ -				\$ -
2 Urban	Acre						\$ -				\$ -				\$ -
3 Dense Suburban	Acre						\$ -				\$ -				\$ -
4 Suburban	Acre						\$ -				\$ -				\$ -
5 Undeveloped	Acre						\$ -				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities															
6 Dense Urban	Acre	\$	2,786,321				\$ -				\$ -				\$ -
7 Urban	Acre	\$	1,371,510				\$ -				\$ -				\$ -
8 Dense Suburban	Acre	\$	908,134				\$ -				\$ -				\$ -
9 Suburban	Acre	\$	208,418				\$ -				\$ -				\$ -
10 Undeveloped	Acre	\$	3,642				\$ -				\$ -				\$ -
Environmental Mitigation = 3% Line Costs							\$ 7,579,276				\$ 3,144,490				\$ 9,477,924
System Elements															
1 Signaling (ATC)	Mile	\$	2,070,000			0.80	\$ 1,646,591			0.80	\$ 1,646,591			0.80	\$ 1,646,591
2 Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.80	\$ 429,545			0.80	\$ 429,545			0.80	\$ 429,545
3 Wayside Protection System	Mile	\$	108,000			0.80	\$ 85,909			0.80	\$ 85,909			0.80	\$ 85,909
Electrification Items															
1 Traction Power supply	Mile	\$	1,170,000			0.80	\$ 930,682			0.80	\$ 930,682			0.80	\$ 930,682
2 Traction Power Distribution	Mile	\$	1,485,000			0.80	\$ 1,181,250			0.80	\$ 1,181,250			0.80	\$ 1,181,250
Program Implementation Costs (per screening)							\$ 264,495,778				\$ 112,234,804				\$ 329,682,697
Program Implementation Costs							\$ 67,446,423				\$ 28,619,875				\$ 84,069,088
Contingencies (per screening) (25%)							\$ 66,123,944				\$ 28,058,701				\$ 82,420,674
Subtotal							\$ 398,066,145				\$ 168,913,381				\$ 496,172,460
Subtotal (Rounded)							\$ 398,000,000				\$ 169,000,000				\$ 496,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)			
Subsection 3			Base: 2009 (3rd Quarter)		D				D				D				D			
					Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles	
							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Subsection Details					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total																				
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$ -			1.00	\$ 4,717,964			0.00	\$ -			0.00	\$ -
Four Track Section - Total																				
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
	Four-Track Section - On Structure	Mile	\$	9,400,320			1.00	\$ 9,435,927			0.00	\$ -			0.00	\$ -			0.00	\$ -
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$ -			0.00	\$ -			0.00	\$ -			1.00	\$ 9,435,927
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$ -			0.00	\$ -			1.00	\$ 9,435,927			0.00	\$ -
Single Track - Total																				
5	Single Track Section - At Grade	Mile	\$	1,549,312			0.00	\$ -			0	\$ -			0	\$ -			0	\$ -
6	Single Track Section - On structure	Mile	\$	2,350,080			0.00	\$ -			0	\$ -			0	\$ -			0	\$ -
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0.00	\$ -			0	\$ -			0	\$ -			0	\$ -
8	Single Track Section - In Trench	Mile	\$	2,350,080			0.00	\$ -			0	\$ -			0	\$ -			0	\$ -
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0.00	\$ -			0	\$ -			0	\$ -			0	\$ -
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0.00	\$ -			0	\$ -			0	\$ -			0	\$ -
Earthwork Items																				
1	Site Preparation - Undeveloped	Acre	\$	9,216			13.38	\$ 123,345			7.91	\$ 72,886			13.38	\$ 123,345			13.38	\$ 123,345
2	Total Cut	CY	\$	6.00			0.00	\$ -			0.00	\$ -			863703.70	\$ 5,182,222			863703.70	\$ 5,182,222
3	Total Fill	CY	\$	6.00			0.00	\$ -			0.00	\$ -			0.00	\$ -			431851.85	\$ 2,591,111
4	Borrow	CY	\$	13.00			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
5	Spoil	CY	\$	13.00			0.00	\$ -			0.00	\$ -			863703.70	\$ 11,228,148			431851.85	\$ 5,614,074
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$ -			0.00	\$ -			13.38	\$ 82,230			0.00	\$ -
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$ -			0.00	\$ -			1.00	\$ 144,931			0.00	\$ -
8	Special Drainage Facilities	5% Earthwork						\$ 6,167				\$ 3,644				\$ 838,044				\$ 675,538
Structures, Tunnels, Walls																				
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$ -			0	\$ -			0	\$ -			0	\$ -
	Standard Structure (4 tracks)	Mile	\$	52,459,008			1.00	\$ 52,657,716												
2	High Structure	Mile	\$	40,424,448				\$ -				\$ -				\$ -				\$ -
3	Long Span Structure	Mile	\$	61,919,232				\$ -				\$ -				\$ -				\$ -
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$ -				\$ -				\$ -				\$ -
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$ -			0.01	\$ 697,344			0.01	\$ 697,344			0.01	\$ 697,344
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$ -				\$ -				\$ -				\$ -
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$ -				\$ -				\$ -				\$ -
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$ -				\$ -				\$ -				\$ -
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$ -			0	\$ -			0	\$ -			0	\$ -
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$ -				\$ -				\$ -				\$ -
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312																
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$ -				\$ -				\$ -				\$ -
12	Crossovers	ea	\$	442,368				\$ -				\$ -				\$ -				\$ -
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$ -			0	\$ -			0	\$ -			0	\$ -
14	Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224			0.00	\$ -			1.00	\$ 57,742,119			0.00	\$ -			0.00	\$ -
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336							0.00	\$ -			1.00	\$ 86,613,178				
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$ -				\$ -				\$ -				\$ -
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				\$ -			0.00	\$ -			0.00	\$ -			1.00	\$ 11,893,585
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
18	Containment Walls	Mile	\$	5,907,456			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$ -				\$ -				\$ -				\$ -
	Four Track Drill & Blast	Mile	\$	293,775,360				\$ -				\$ -				\$ -				\$ -
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$ -				\$ -				\$ -				\$ -
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624																
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792																
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$ -			0.00	\$ -			0.00	\$ -			1.00	\$ 263,486,448
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																
Grade Separations																				
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$ -				\$ -				\$ -				\$ -
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			0	\$ -				\$ -				\$ -				\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			1	\$ 2,759,680				\$ -				\$ -				\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$ -				\$ -				\$ -				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$ -				\$ -				\$ -				\$ -



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)			
Subsection 3			Base: 2009 (3rd Quarter)	D				D				D				D				
				Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles						
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles						
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 0 + 00		0.00 Miles						
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)				Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles						
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles						
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles						
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			\$	-		\$	-			\$	-			\$	-	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			\$	-		\$	-			\$	-			\$	-	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328			\$	-		\$	-			\$	-			\$	-	
7	Street Bridging HSR Trench	ea	\$	1,398,784			\$	-	6	\$	8,392,704		6	\$	8,392,704			\$	-	
8	Minor Crossing Closures	ea	\$	87,040			\$	-		\$	-			\$	-			\$	-	
Building Items																				
1	Intermediate Passenger Stations	Each	\$	-			\$	-		\$	-			\$	-			\$	-	
2	Terminal Passenger Stations	Each	\$	-			\$	-		\$	-			\$	-			\$	-	
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000			\$	-		\$	-			\$	-			\$	-	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000		1	\$	15,000,000		\$	-			\$	-			\$	-	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000			\$	-		\$	-			\$	-			\$	-	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000			\$	-	1	\$	15,000,000		1	\$	15,000,000		1	\$	15,000,000	
3	Maintenance Facility	Each	\$	123,921,884			\$	-		\$	-			\$	-			\$	-	
4	Parking - Structures	space	\$	-			\$	-		\$	-			\$	-			\$	-	
5	Parking - At Grade	space	\$	-			\$	-		\$	-			\$	-			\$	-	
Rail & Utility Relocation																				
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896			\$	-		\$	-			\$	-			\$	-	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896			\$	-		\$	-			\$	-			\$	-	
3	Single Track Removal	Mile	\$	130,048			\$	-		\$	-			\$	-			\$	-	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288			\$	-		\$	-			\$	-			\$	-	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416			\$	-		\$	-			\$	-			\$	-	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168			\$	-		\$	-			\$	-			\$	-	
7	Major Utility Relocations - Suburban	Mile	\$	464,896			\$	-		\$	-			\$	-			\$	-	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720			\$	-		\$	-			\$	-			\$	-	
ROW (Not Included)																				
ROW required for each segment																				
1	Dense Urban	Acre	\$	2,786,321			\$	-		\$	-			\$	-			\$	-	
2	Urban	Acre	\$	1,371,510			\$	-		\$	-			\$	-			\$	-	
3	Dense Suburban	Acre	\$	908,134			\$	-		\$	-			\$	-			\$	-	
4	Suburban	Acre	\$	208,418			\$	-		\$	-			\$	-			\$	-	
5	Undeveloped	Acre	\$	3,642			\$	-		\$	-			\$	-			\$	-	
ROW required for Temp. Construction Easement																				
1	Dense Urban	Acre					\$	-		\$	-			\$	-			\$	-	
2	Urban	Acre					\$	-		\$	-			\$	-			\$	-	
3	Dense Suburban	Acre					\$	-		\$	-			\$	-			\$	-	
4	Suburban	Acre					\$	-		\$	-			\$	-			\$	-	
5	Undeveloped	Acre					\$	-		\$	-			\$	-			\$	-	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																				
6	Dense Urban	Acre	\$	2,786,321			\$	-		\$	-			\$	-			\$	-	
7	Urban	Acre	\$	1,371,510			\$	-		\$	-			\$	-			\$	-	
8	Dense Suburban	Acre	\$	908,134			\$	-		\$	-			\$	-			\$	-	
9	Suburban	Acre	\$	208,418			\$	-		\$	-			\$	-			\$	-	
10	Undeveloped	Acre	\$	3,642			\$	-		\$	-			\$	-			\$	-	
Environmental Mitigation = 3% Line Costs							\$	2,399,485			\$	2,598,800			\$	4,132,142			\$	9,440,988
System Elements																				
1	Signaling (ATC)	Mile	\$	2,070,000			1.00	\$	2,077,841			1.00	\$	2,077,841			1.00	\$	2,077,841	
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.00	\$	542,045			1.00	\$	542,045			1.00	\$	542,045	
3	Wayside Protection System	Mile	\$	108,000			1.00	\$	108,409			1.00	\$	108,409			1.00	\$	108,409	
Electrification Items																				
1	Traction Power supply	Mile	\$	1,170,000			1.00	\$	1,174,432			1.00	\$	1,174,432			1.00	\$	1,174,432	
2	Traction Power Distribution	Mile	\$	1,485,000			1.00	\$	1,490,625			1.00	\$	1,490,625			1.00	\$	1,490,625	
							\$	87,775,674			\$	94,618,813			\$	147,263,569			\$	329,533,936
Program Implementation Costs (per screening)							\$	22,382,797			\$	24,127,797			\$	37,552,210			\$	84,031,154
Program Implementation Costs																				
Contingencies (per screening) (25%)							\$	21,943,918			\$	23,654,703			\$	36,815,892			\$	82,383,484
Subtotal							\$	132,102,389			\$	142,401,313			\$	221,631,671			\$	495,948,573
Subtotal (Rounded)							\$	132,000,000			\$	142,000,000			\$	222,000,000			\$	496,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)				
Subsection 3				Base: 2009 (3rd Quarter)	D				D				
					Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		
Subsection Details							Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Section - Total													
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$	-		0.00	\$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	-		0.00	\$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			1.00	\$	4,717,964		1.00	\$	4,717,964
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-		1.00	\$	4,717,964
Four Track Section - Total													
Four-track Section - At Grade			Mile	\$	4,200,448		0.00	\$	-		0.00	\$	-
Four-Track Section - On Structure			Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-
Four-Track Section - In Tunnel or Subway			Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-
Four-Track Section - In Trench			Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-
Single Track - Total													
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-		0	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-		0	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-		0	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-		0	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-		0	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-		0	\$	-
Earthwork Items													
1	Site Preparation - Undeveloped	Acre	\$	9,216				\$	-		21.29	\$	196,231
2	Total Cut	CY	\$	6.00			431851.85	\$	2,591,111		1374074.07	\$	8,244,444
3	Total Fill	CY	\$	6.00			0	\$	-		0.00	\$	-
4	Borrow	CY	\$	13.00			0.00	\$	-		0.00	\$	-
5	Spoil	CY	\$	13.00			431851.85	\$	5,614,074		1374074.07	\$	17,862,963
6	Landscape erosion Control	Acre	\$	6,144			0	\$	-		0.00	\$	-
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-		1.00	\$	144,931
8	Special Drainage Facilities	5% Earthwork						\$	410,259			\$	1,322,428
Structures, Tunnels, Walls													
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0	\$	-		0	\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008									
2	High Structure	Mile	\$	40,424,448				\$	-			\$	-
3	Long Span Structure	Mile	\$	61,919,232				\$	-			\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-			\$	-
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.00	\$	-		0.01	\$	697,344
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-			\$	-
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-			\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-			\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680				\$	-			\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-			\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312			1.00	\$	107,041,241				
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896									
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-			\$	-
12	Crossovers	ea	\$	442,368				\$	-			\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				\$	-		0.00	\$	-
14	Trench Long (2 tracks) (1000 + ft)	Mile	\$	57,524,224			0.00	\$	-		0	\$	-
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336									
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-			\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856									
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			1.00	\$	11,893,585		1.00	\$	11,893,585
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$	-		0	\$	-
18	Containment Walls	Mile	\$	5,907,456				\$	-		0	\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-			\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-			\$	-
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-			\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624									
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792									
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-		0.00	\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114							1.00	\$	329,765,512
Grade Separations													
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-			\$	-
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528								\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	-			\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-			\$	-
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$	-			\$	-



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)						
Subsection 3			Base: 2009 (3rd Quarter)		D				D						
					Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles				
Subsection Details							Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Tunnel (Mile)					Start: 1087 + 00	End: 1140 + 00	1.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles				
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 1087 + 00	End: 1140 + 00	1.00 Miles				
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-			\$	-		
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$	-			\$	-		
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-			\$	-		
7	Street Bridging HSR Trench	ea	\$	1,398,784			0	\$	-			\$	-		
8	Minor Crossing Closures	ea	\$	87,040			0	\$	-			\$	-		
Building Items															
1	Intermediate Passenger Stations	Each	\$	-				\$	-			\$	-		
2	Terminal Passenger Stations	Each	\$	-				\$	-			\$	-		
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$	-			\$	-		
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-			\$	-		
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-			\$	-		
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-		1	\$	15,000,000		
3	Maintenance Facility	Each	\$	123,921,884				\$	-			\$	-		
4	Parking - Structures	space	\$	-				\$	-			\$	-		
5	Parking - At Grade	space	\$	-				\$	-			\$	-		
Rail & Utility Relocation															
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-			\$	-		
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-			\$	-		
3	Single Track Removal	Mile	\$	130,048				\$	-			\$	-		
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-			\$	-		
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-			\$	-		
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-			\$	-		
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-			\$	-		
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-			\$	-		
ROW (Not Included)															
ROW required for each segment															
1	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-		
2	Urban	Acre	\$	1,371,510				\$	-			\$	-		
3	Dense Suburban	Acre	\$	908,134				\$	-			\$	-		
4	Suburban	Acre	\$	208,418				\$	-			\$	-		
5	Undeveloped	Acre	\$	3,642				\$	-			\$	-		
ROW required for Temp. Construction Easement															
1	Dense Urban	Acre						\$	-			\$	-		
2	Urban	Acre						\$	-			\$	-		
3	Dense Suburban	Acre						\$	-			\$	-		
4	Suburban	Acre						\$	-			\$	-		
5	Undeveloped	Acre						\$	-			\$	-		
Right-of-Way Required for Stations, Maintenance & Parking Facilities															
6	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-		
7	Urban	Acre	\$	1,371,510				\$	-			\$	-		
8	Dense Suburban	Acre	\$	908,134				\$	-			\$	-		
9	Suburban	Acre	\$	208,418				\$	-			\$	-		
10	Undeveloped	Acre	\$	3,642				\$	-			\$	-		
Environmental Mitigation = 3% Line Costs								\$	3,968,047			\$	11,836,901		
System Elements															
1	Signaling (ATC)	Mile	\$	2,070,000			1.00	\$	2,077,841			1.00	\$	2,077,841	
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.00	\$	542,045			1.00	\$	542,045	
3	Wayside Protection System	Mile	\$	108,000			1.00	\$	108,409			1.00	\$	108,409	
Electrification Items															
1	Traction Power supply	Mile	\$	1,170,000			1.00	\$	1,174,432			1.00	\$	1,174,432	
2	Traction Power Distribution	Mile	\$	1,485,000			1.00	\$	1,490,625			1.00	\$	1,490,625	
Subtotal								\$	141,629,634			\$	411,793,620		
								\$	36,115,557			\$	105,007,373		
Program Implementation Costs (per screening)								\$				\$			
Program Implementation Costs								\$				\$			
Contingencies (per screening) (25%)								\$	35,407,409			\$	102,948,405		
Subtotal								\$	213,152,599					\$	619,749,399
Subtotal (Rounded)								\$	213,000,000					\$	620,000,000



COST ELEMENTS		UNIT	UNIT PRICE	At-Grade			
Subsection 3		Base: 2009 (3rd Quarter)		E			
				Start: 1140 + 00	End: 1164 + 00	0.45 Miles	
Subsection Details						Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 1140 + 00	End: 1164 + 00	0.45 Miles	
Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Section - Total							
1	Double Track Section - At Grade	Mile	\$ 2,100,224			0.00	\$ -
2	Double Track Section - On Structure	Mile	\$ 4,700,160			0.00	\$ -
3	Double Track Section - In Tunnel or Subway	Mile	\$ 4,700,160			0.00	\$ -
4	Double Track Section - In Trench	Mile	\$ 4,700,160			0.00	\$ -
Four Track Section - Total							
	Four-track Section - At Grade	Mile	\$ 4,200,448			0.45	\$ 1,909,295
	Four-Track Section - On Structure	Mile	\$ 9,400,320			0.00	\$ -
	Four-Track Section - In Tunnel or Subway	Mile	\$ 9,400,320			0	\$ -
	Four-Track Section - In Trench	Mile	\$ 9,400,320			0	\$ -
Single Track - Total							
5	Single Track Section - At Grade	Mile	\$ 1,549,312			0	\$ -
6	Single Track Section - On structure	Mile	\$ 2,350,080			0	\$ -
7	Single Track Section - In Tunnel or Subway	Mile	\$ 2,350,080			0	\$ -
8	Single Track Section - In Trench	Mile	\$ 2,350,080			0	\$ -
9	Freight Double Track - At Grade	Mile	\$ 2,839,552			0	\$ -
10	Freight Single Track - At Grade	Mile	\$ 1,549,312			0	\$ -
Earthwork Items							
1	Site Preparation - Undeveloped	Acre	\$ 9,216			0.00	\$ -
2	Total Cut	CY	\$ 6.00			0.00	\$ -
3	Total Fill	CY	\$ 6.00			0.00	\$ -
4	Borrow	CY	\$ 13.00			0.00	\$ -
5	Spoil	CY	\$ 13.00			0.00	\$ -
6	Landscape erosion Control	Acre	\$ 6,144			0.00	\$ -
7	Security Fencing (Both sides of ROW)	Mile	\$ 144,384			0.45	\$ 65,629
8	Special Drainage Facilities	5% Earthwork					\$ 3,281
Structures, Tunnels, Walls							
1	Standard Structure (2 tracks)	Mile	\$ 34,972,672			0.00	\$ -
	Standard Structure (4 tracks)	Mile	\$ 52,459,008				
2	High Structure	Mile	\$ 40,424,448				\$ -
3	Long Span Structure	Mile	\$ 61,919,232				\$ -
4	Waterway Crossing - Primary	Mile	\$ 85,342,208				\$ -
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$ 92,049,408				\$ -
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$ 142,731,264				\$ -
7	Twin Single Track TBM (<6 Miles)	Mile	\$ 106,637,312				\$ -
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$ 176,720,896				\$ -
9	Double Track Drill & Blast	Mile	\$ 146,887,680			0	\$ -
10	Double Track Mined (Soft Soil)	Mile	\$ 79,200,000				\$ -
	Double Track TBM (<6 Miles)	Mile	\$ 106,637,312				
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 176,720,896				
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$ 126,205,952				\$ -
12	Crossovers	ea	\$ 442,368				\$ -
13	Cut & Cover Double Track Tunnel	Mile	\$ 131,246,080			0	\$ -
14	Trench Long (2 tracks) (1000 + ft)	Mile	\$ 57,524,224			0	\$ -
	Trench Long (4 tracks) (1000 + ft)	Mile	\$ 86,286,336				
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$ 78,843,904				\$ -
	Trench Short (4 tracks) (<1000 ft)	Mile	\$ 118,265,856				
16	Mechanical & Electrical for Tunnels	Mile	\$ 11,848,704			0	\$ -
17	Retaining Walls	Mile	\$ 8,613,888			0	\$ -
18	Containment Walls	Mile	\$ 5,907,456			0	\$ -
19	Single Track Cut and Cover Subway	Mile	\$ 131,246,080				\$ -
	Four Track Drill & Blast	Mile	\$ 293,775,360				\$ -
	Four Track Mined (Soft Soil)	Mile	\$ 158,400,000				\$ -
	Four Track TBM (<6 Miles)	Mile	\$ 213,274,624				
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$ 353,441,792				
	Four Track Cut & Cover Tunnel	Mile	\$ 262,492,160			0.00	\$ -
	Double Deck with Double Track Cut and Cover Box	Mile	\$ 328,521,114				
Grade Separations							
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$ 13,284,352				\$ -
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -



COST ELEMENTS		UNIT	UNIT PRICE	At-Grade			
Subsection 3		Base: 2009 (3rd Quarter)		E			
				Start: 1140 + 00	End: 1164 + 00	0.45 Miles	
Subsection Details						Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 1140 + 00	End: 1164 + 00	0.45 Miles	
Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -
7	Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -
8	Minor Crossing Closures	ea	\$ 87,040				\$ -
Building Items							
1	Intermediate Passenger Stations	Each	\$ -				\$ -
Terminal Passenger Stations		Each	\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000			1	\$ 15,000,000
	Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -
3	Maintenance Facility	Each	\$ 123,921,884				\$ -
4	Parking - Structures	space	\$ -				\$ -
5	Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation							
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -
Single Track Removal		Mile	\$ 130,048				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
ROW (Not Included)							
ROW required for each segment							
1	Dense Urban	Acre	\$ 2,786,321				\$ -
2	Urban	Acre	\$ 1,371,510				\$ -
3	Dense Suburban	Acre	\$ 908,134				\$ -
4	Suburban	Acre	\$ 208,418				\$ -
5	Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement							
1	Dense Urban	Acre					\$ -
2	Urban	Acre					\$ -
3	Dense Suburban	Acre					\$ -
4	Suburban	Acre					\$ -
5	Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities							
6	Dense Urban	Acre	\$ 2,786,321				\$ -
7	Urban	Acre	\$ 1,371,510				\$ -
8	Dense Suburban	Acre	\$ 908,134				\$ -
9	Suburban	Acre	\$ 208,418				\$ -
10	Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs							\$ 509,346
System Elements							
1	Signaling (ATC)	Mile	\$ 2,070,000			0.45	\$ 940,909
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.45	\$ 245,455
3	Wayside Protection System	Mile	\$ 108,000			0.45	\$ 49,091
Electrification Items							
1	Traction Power supply	Mile	\$ 1,170,000			0.45	\$ 531,818
2	Traction Power Distribution	Mile	\$ 1,485,000			0.45	\$ 675,000
Subtotal							\$ 19,929,824
Program Implementation Costs (per screening)							\$ 5,082,105
Program Implementation Costs							
Contingencies (per screening) (25%)							\$ 4,982,456
Subtotal							\$ 29,994,385
Subtotal (Rounded)							\$ 30,000,000



Subsection 4	4A (0.7 miles)	4B1 (1.3 miles)	4B2 (3.4 miles)				
	Berm	Berm	Aerial Viaduct	At Grade	Open Trench/Tunnel	Covered Trench/Tunnel	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$50	\$123	\$418 (4 tracks)	\$125 (4 tracks) \$39 (2 tracks)	\$644 (4 tracks)	\$1,637 (4 tracks)	\$1,502 (2 tracks)
Acquisition Cost of Permanent ROW	Medium	Medium	Medium	Highest	Lowest	Lowest	Lowest
Notes:		1. Caltrain Hillsdale Station. 2. New 28th Ave extension	<b>4 tracks -</b> 1. Raise Ralston Ave, Harbor Blvd, F St, and Holly St to smooth profile; 2. Caltrain Belmont and San Carlos stations;	<b>4 tracks -</b> 1. Caltrain Belmont and San Carlos stations. <b>2 tracks -</b> 1. Electrification only. <i>2. Must be combined with 2 track deep tunnel option.</i>	<b>4 tracks -</b> 1. Raise Ralston Ave, Harbor Blvd, F St, and Holly St to smooth profile; 2. Caltrain Belmont and San Carlos stations;	<b>4 tracks -</b> 1. Raise Ralston Ave, Harbor Blvd, F St, and Holly St to smooth profile; 2. Caltrain Belmont and San Carlos stations;	<b>2 tracks -</b> 1. This option would leave existing Caltrain unchanged because subsection already grade separated. <i>2. Must be combined with 2 track at grade option.</i>



Subsection 4	4C (1.6 miles)				4D (0.6 miles)					
	Aerial Viaduct	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Aerial Viaduct (HST Only)	At Grade (HST Only)	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$200 (4 tracks); \$145 (2 tracks)	\$308 (4 tracks)	\$765 (4 tracks)	\$336 (2 tracks)	\$63 (2 tracks)	\$7 (2 tracks)	\$9 (4 tracks)	\$103 (4 tracks); \$72 (2 tracks)	\$280 (4 tracks); \$152 (2 tracks)	\$121 (2 tracks)
Acquisition Cost of Permanent ROW	Medium	Medium	Lowest	Lowest	Medium	Highest	Highest	Medium	Lowest	Lowest
Notes:	<b>4 tracks -</b> 1. Caltrain Redwood City Station. 2. Potential HST Redwood City station (costs not included). <b>2 tracks -</b> 1. Caltrain Redwood City Station. 2. Potential HST Redwood City station (costs not included). 3. <i>Must be combined with 2 track deep tunnel option.</i>	<b>4 tracks -</b> 1. Caltrain Redwood City Station. 2. Potential HST Redwood City station (costs not included). 3. Raise Jefferson Ave to smooth profile.	<b>4 tracks -</b> 1. Caltrain Redwood City Station. 2. Potential HST Redwood City station (costs not included). 3. Raise Jefferson Ave to smooth profile.	<b>2 tracks -</b> 1. No potential HST Redwood City station. 2. Two tracks only. 3. <i>Must be combined with 2 track aerial viaduct option.</i>	<b>2 tracks -</b> 1. Convert Woodside Road overpass to underpass. 2. Two tracks only. 3. <i>Must be combined with 2 track at grade option.</i>	<b>2 tracks -</b> 1. Existing 4-track alignment. 2. <i>Must be combined with 2 track aerial viaduct or trench or tunnel option.</i>	<b>4 tracks -</b> 1. Existing 4-track alignment. 2. Lower Dumbarton Branch Line (3000'), Lower Port of Redwood City Spur (6000')	<b>4 tracks -</b> 1. Lower Dumbarton Branch Line (3000'), Lower Port of Redwood City Spur (6000')	<b>4 tracks -</b> 1. Lower Dumbarton Branch Line (3000'), Lower Port of Redwood City Spur (6000')	<b>2 tracks -</b> 1. <i>Must be combined with 2 track aerial viaduct option.</i>



COST ELEMENTS			UNIT	UNIT PRICE	Berm (4 tracks)			
Subsection 4			Base: 2009 (3rd Quarter)		A			
					Start: 1164 + 00	End: 1200 + 00	0.68 Miles	
Subsection Details							Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 1164 + 00	End: 1182 + 00	0.34 Miles	
Four Track Elevated (Mile)					Start: 1182 + 00	End: 1200 + 00	0.34 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Section - Total								
1 Double Track Section - At Grade	Mile	\$	2,100,224				0.00 \$	-
2 Double Track Section - On Structure	Mile	\$	4,700,160				0.00 \$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				0.00 \$	-
4 Double Track Section - In Trench	Mile	\$	4,700,160				0.00 \$	-
Four Track Section - Total								
Four-track Section - At Grade	Mile	\$	4,200,448				0.34 \$	1,431,971
Four-Track Section - On Structure	Mile	\$	9,400,320				0.34 \$	3,204,655
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0.00 \$	-
Four-Track Section - In Trench	Mile	\$	9,400,320				0.00 \$	-
Single Track - Total								
5 Single Track Section - At Grade	Mile	\$	1,549,312				0.00 \$	-
6 Single Track Section - On structure	Mile	\$	2,350,080				0.00 \$	-
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0.00 \$	-
8 Single Track Section - In Trench	Mile	\$	2,350,080				0.00 \$	-
9 Freight Double Track - At Grade	Mile	\$	2,839,552				0.00 \$	-
10 Freight Single Track - At Grade	Mile	\$	1,549,312				0.00 \$	-
Earthwork Items								
1 Site Preparation - Undeveloped	Acre	\$	9,216				12.88 \$	118,702
2 Total Cut	CY	\$	6.00				0.00 \$	-
3 Total Fill	CY	\$	6.00				133333.33 \$	800,000
4 Borrow	CY	\$	13.00				133333.33 \$	1,733,333
5 Spoil	CY	\$	13.00				0.00 \$	-
6 Landscape erosion Control	Acre	\$	6,144				12.88 \$	79,135
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.68 \$	98,444
8 Special Drainage Facilities	5% Earthwork						\$	141,481
Structures, Tunnels, Walls								
1 Standard Structure (2 tracks)	Mile	\$	34,972,672				\$	-
Standard Structure (4 tracks)	Mile	\$	52,459,008				0.34 \$	17,883,753
2 High Structure	Mile	\$	40,424,448				\$	-
3 Long Span Structure	Mile	\$	61,919,232				\$	-
4 Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-
9 Double Track Drill & Blast	Mile	\$	146,887,680				0.00 \$	-
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-
Double Track TBM (<6 Miles)	Mile	\$	106,637,312					
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896					
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-
12 Crossovers	ea	\$	442,368				\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				0.00 \$	-
14 Trench Long (2 tracks) (1000+ ft)	Mile	\$	57,524,224				0.00 \$	-
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336					
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856					
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				\$	-
17 Retaining Walls	Mile	\$	8,613,888				0.34 \$	2,936,553
18 Containment Walls	Mile	\$	5,907,456				\$	-
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-
Four Track Drill & Blast	Mile	\$	293,775,360				\$	-
Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-
Four Track TBM (<6 Miles)	Mile	\$	213,274,624					
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792					
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00 \$	-
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114					
Grade Separations								
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-



COST ELEMENTS		UNIT	UNIT PRICE	Berm (4 tracks)			
Subsection 4			Base: 2009 (3rd Quarter)	A			
				Start: 1164 + 00	End: 1200 + 00	0.68 Miles	
Subsection Details						Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 1164 + 00	End: 1182 + 00	0.34 Miles	
Four Track Elevated (Mile)				Start: 1182 + 00	End: 1200 + 00	0.34 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528			0	\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -
7	Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -
8	Minor Crossing Closures	ea	\$ 87,040				\$ -
Building Items							
1	Intermediate Passenger Stations	Each	\$ -				\$ -
2	Terminal Passenger Stations	Each	\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -
3	Maintenance Facility	Each	\$ 123,921,884				\$ -
4	Parking - Structures	space	\$ -				\$ -
5	Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation							
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -
3	Single Track Removal	Mile	\$ 130,048				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
ROW (Not Included)							
ROW required for each segment							
1	Dense Urban	Acre	\$ 2,786,321				\$ -
2	Urban	Acre	\$ 1,371,510				\$ -
3	Dense Suburban	Acre	\$ 908,134				\$ -
4	Suburban	Acre	\$ 208,418				\$ -
5	Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement							\$ -
1	Dense Urban	Acre					\$ -
2	Urban	Acre					\$ -
3	Dense Suburban	Acre					\$ -
4	Suburban	Acre					\$ -
5	Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities							
6	Dense Urban	Acre	\$ 2,786,321				\$ -
7	Urban	Acre	\$ 1,371,510				\$ -
8	Dense Suburban	Acre	\$ 908,134				\$ -
9	Suburban	Acre	\$ 208,418				\$ -
10	Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs							\$ 852,841
System Elements							
1	Signaling (ATC)	Mile	\$ 2,070,000			0.68 Miles	\$ 1,411,364
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.68 Miles	\$ 368,182
3	Wayside Protection System	Mile	\$ 108,000			0.68 Miles	\$ 73,636
Electrification Items							
1	Traction Power supply	Mile	\$ 1,170,000			0.68 Miles	\$ 797,727
2	Traction Power Distribution	Mile	\$ 1,485,000			0.68 Miles	\$ 1,012,500
Subtotal							\$ 32,944,275
Program Implementation Costs (per screening)							\$ 8,400,790
Program Implementation Costs							
Contingencies (per screening) (25%)							\$ 8,236,069
Subtotal							\$ 49,581,134
Subtotal (Rounded)							\$ 50,000,000



COST ELEMENTS				UNIT	UNIT PRICE	Berm (4 tracks)				Aerial Viaduct (4 tracks)				At-Grade (2 tracks)				At-Grade (4 tracks)			
Subsection 4				Base: 2009 (3rd Quarter)		B1				B2				B2				B2			
						Start: 1200 + 00	Start: 1270 + 00	1.33 Miles		Start: 1270 + 00	Start: 1450 + 00	3.41 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles	
Subsection Details								Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)						Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 1200 + 00	End: 1235 + 00	0.66 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)						Start: 1235 + 00	End: 1270 + 00	0.66 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles	
Four Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total																					
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$	-		0.00	\$	-		3.41	\$	7,159,855		0.00	\$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
Four Track Section - Total																					
	Four-track Section - At Grade	Mile	\$	4,200,448			0.66	\$	2,784,388		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Four-Track Section - On Structure	Mile	\$	9,400,320			0.66	\$	6,231,273		3.41	\$	32,046,545		0.00	\$	-		3.41	\$	32,046,545
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
Single Track - Total																					
5	Single Track Section - At Grade	Mile	\$	1,549,312			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
Earthwork Items																					
1	Site Preparation - Undeveloped	Acre	\$	9,216			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
2	Total Cut	CY	\$	6.00			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
3	Total Fill	CY	\$	6.00			259259.26	\$	1,555,556		0.00	\$	-		0.00	\$	-		0.00	\$	-
4	Borrow	CY	\$	13.00			259259.26	\$	3,370,370		0.00	\$	-		0.00	\$	-		0.00	\$	-
5	Spoil	CY	\$	13.00			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.66	\$	95,709		0.00	\$	-		3.41	\$	492,218		3.41	\$	492,218
8	Special Drainage Facilities	5% Earthwork					\$	251,082			\$	-			\$	24,611			\$	24,611	
Structures, Tunnels, Walls																					
1	Standard Structure (2 tracks)	Mile	\$	34,972,672				\$	-		0.00	\$	-		0.00	\$	-			\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008			0.66	\$	34,773,964		3.41	\$	178,837,527								
2	High Structure	Mile	\$	40,424,448				\$	-			\$	-			\$	-			\$	-
3	Long Span Structure	Mile	\$	61,919,232				\$	-			\$	-			\$	-			\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-			\$	-			\$	-			\$	-
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$	-			\$	-			\$	-			\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-			\$	-			\$	-			\$	-
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-			\$	-			\$	-			\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-			\$	-			\$	-			\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	792,000,000				\$	-			\$	-			\$	-			\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312																	
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																	
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-			\$	-			\$	-			\$	-
12	Crossovers	ea	\$	442,368				\$	-			\$	-			\$	-			\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
14	Trench Long (2 tracks) (1000+ ft)	Mile	\$	57,524,224			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336																	
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-			\$	-			\$	-			\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																	
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				\$	-			\$	-			\$	-			\$	-
17	Retaining Walls	Mile	\$	8,613,888			0.66	\$	5,709,964		0.00	\$	-		0.00	\$	-		0.00	\$	-
18	Containment Walls	Mile	\$	5,907,456				\$	-			\$	-			\$	-			\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-			\$	-			\$	-			\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-			\$	-			\$	-			\$	-
	Four Track Mined (Soft Soil)	Mile	\$	1,584,000,000				\$	-			\$	-			\$	-			\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624																	
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792																	
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																	
Grade Separations																					
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-			\$	-			\$	-			\$	-
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			0	\$	-		0	\$	-		0	\$	-		0	\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			1	\$	2,759,680		4	\$	11,038,720			\$	-			\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-		</										



COST ELEMENTS			UNIT	UNIT PRICE	Berm (4 tracks)				Aerial Viaduct (4 tracks)				At-Grade (2 tracks)				At-Grade (4 tracks)			
Subsection 4			Base: 2009 (3rd Quarter)		B1				B2				B2				B2			
					Start: 1200 + 00	Start: 1270 + 00	1.33 Miles		Start: 1270 + 00	Start: 1450 + 00	3.41 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 1200 + 00	End: 1235 + 00	0.66 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 1235 + 00	End: 1270 + 00	0.66 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$ -			\$ -				\$ -				\$ -	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$ -			\$ -				\$ -				\$ -	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$ -			\$ -				\$ -				\$ -	
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$ -			\$ -				\$ -				\$ -	
8	Minor Crossing Closures	ea	\$	87,040				\$ -			\$ -				\$ -				\$ -	
Building Items																				
1	Intermediate Passenger Stations	Each	\$	-				\$ -			\$ -				\$ -				\$ -	
2	Terminal Passenger Stations	Each	\$	-				\$ -			\$ -				\$ -				\$ -	
	Caltrain Passenger Station - At-Grade	Each	\$	\$15,000,000				\$ -			\$ -				\$ -				\$ -	
	Caltrain Passenger Station - On Structure	Each	\$	\$15,000,000	1		15,000,000	\$ -	2		30,000,000				\$ -		2		30,000,000	
2	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	\$15,000,000				\$ -			\$ -				\$ -				\$ -	
	Caltrain Passenger Station - In Trench	Each	\$	\$15,000,000				\$ -			\$ -				\$ -				\$ -	
3	Maintenance Facility	Each	\$	123,921,884				\$ -			\$ -				\$ -				\$ -	
4	Parking - Structures	space	\$	-				\$ -			\$ -				\$ -				\$ -	
5	Parking - At Grade	space	\$	-				\$ -			\$ -				\$ -				\$ -	
Rail & Utility Relocation																				
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -			\$ -				\$ -				\$ -	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$ -			\$ -				\$ -				\$ -	
3	Single Track Removal	Mile	\$	130,048				\$ -			\$ -				\$ -				\$ -	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$ -			\$ -				\$ -				\$ -	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$ -			\$ -				\$ -				\$ -	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$ -			\$ -				\$ -				\$ -	
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$ -			\$ -				\$ -				\$ -	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$ -			\$ -				\$ -				\$ -	
ROW (Not Included)																				
ROW required for each segment																				
1	Dense Urban	Acre	\$	2,786,321				\$ -			\$ -				\$ -				\$ -	
2	Urban	Acre	\$	1,371,510				\$ -			\$ -				\$ -				\$ -	
3	Dense Suburban	Acre	\$	908,134				\$ -			\$ -				\$ -				\$ -	
4	Suburban	Acre	\$	208,418				\$ -			\$ -				\$ -				\$ -	
5	Undeveloped	Acre	\$	3,642				\$ -			\$ -				\$ -				\$ -	
	ROW required for Temp. Construction Easement							\$ -			\$ -				\$ -				\$ -	
1	Dense Urban	Acre						\$ -			B				\$ -				B	
2	Urban	Acre						\$ -			\$ -				\$ -				\$ -	
3	Dense Suburban	Acre						\$ -			\$ -				\$ -				\$ -	
4	Suburban	Acre						\$ -			\$ -				\$ -				\$ -	
5	Undeveloped	Acre						\$ -			\$ -				\$ -				\$ -	
	Right-of-Way Required for Stations, Maintenance & Parking Facilities																			
6	Dense Urban	Acre	\$	2,786,321				\$ -			\$ -				\$ -				\$ -	
7	Urban	Acre	\$	1,371,510				\$ -			\$ -				\$ -				\$ -	
8	Dense Suburban	Acre	\$	908,134				\$ -			\$ -				\$ -				\$ -	
9	Suburban	Acre	\$	208,418				\$ -			\$ -				\$ -				\$ -	
10	Undeveloped	Acre	\$	3,642				\$ -			\$ -				\$ -				\$ -	
	Environmental Mitigation = 3% Line Costs							\$ 2,175,960			\$ 7,557,684				\$ 230,301				\$ 1,876,901	
System Elements																				
1	Signaling (ATC)	Mile	\$	2,070,000			1.33	\$ 2,744,318			3.41	\$ 7,056,818			3.41	\$ 7,056,818			3.41	\$ 7,056,818
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.33	\$ 715,909			3.41	\$ 1,840,909			3.41	\$ 1,840,909			3.41	\$ 1,840,909
3	Wayside Protection System	Mile	\$	108,000			1.33	\$ 143,182			3.41	\$ 368,182			3.41	\$ 368,182			3.41	\$ 368,182
Electrification Items																				
1	Traction Power supply	Mile	\$	1,170,000			1.33	\$ 1,551,136			3.41	\$ 3,988,636			3.41	\$ 3,988,636			3.41	\$ 3,988,636
2	Traction Power Distribution	Mile	\$	1,485,000			1.33	\$ 1,968,750			3.41	\$ 5,062,500			3.41	\$ 5,062,500			3.41	\$ 5,062,500
		Subtotal						\$ 81,831,240			\$ 277,797,522				\$ 26,224,030				\$ 82,757,321	
Program Implementation Costs (per screening)								\$ 20,866,966			\$ 70,838,368				\$ 6,687,128				\$ 21,103,117	
Program Implementation Costs																				
Contingencies (per screening) (25%)								\$ 20,457,810			\$ 69,449,380				\$ 6,556,007				\$ 20,689,330	
Subtotal								\$ 123,156,016			\$ 418,085,271				\$ 39,467,165				\$ 124,549,768	
Subtotal (Rounded)								\$ 123,000,000			\$ 418,000,000				\$ 39,000,000				\$ 125,000,000	



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (HST only)			
Subsection 4			Base: 2009 (3rd Quarter)		B2				B2				B2			
					Start: 1270 + 00	Start: 1450 + 00	3.41 Miles		Start: 1270 + 00	Start: 1450 + 00	3.41 Miles		Start: 1270 + 00	Start: 1450 + 00	3.41 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total																
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$ -			0.00	\$ -			0.00	\$ -
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			3.41	\$ 16,023,273
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -
Four Track Section - Total																
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$ -			0.00	\$ -			0.00	\$ -
	Four-Track Section - On Structure	Mile	\$	9,400,320			0	\$ -			0.00	\$ -			0.00	\$ -
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0	\$ -			3.41	\$ 32,046,545				
	Four-Track Section - In Trench	Mile	\$	9,400,320			3.41	\$ 32,046,545			0	\$ -			0	\$ -
Single Track - Total																
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$ -			0	\$ -			0	\$ -
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -
Earthwork Items																
1	Site Preparation - Undeveloped	Acre	\$	9,216			45.45	\$ 418,909			45.45	\$ 418,909			0.00	\$ -
2	Total Cut	CY	\$	6.00			1466666.67	\$ 8,800,000			1466666.67	\$ 8,800,000			0.00	\$ -
3	Total Fill	CY	\$	6.00			0.00	\$ -			0.00	\$ -			0.00	\$ -
4	Borrow	CY	\$	13.00			0.00	\$ -			0.00	\$ -			0.00	\$ -
5	Spoil	CY	\$	13.00			1466666.67	\$ 19,066,667			1466666.67	\$ 19,066,667			0.00	\$ -
6	Landscape erosion Control	Acre	\$	6,144			45.45	\$ 279,273			45.45	\$ 279,273			0.00	\$ -
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			3.41	\$ 492,218			0.00	\$ -			0.00	\$ -
8	Special Drainage Facilities	5% Earthwork						\$ 1,452,853				\$ 1,428,242			\$	\$ -
Structures, Tunnels, Walls																
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$ -			0.00	\$ -			0.00	\$ -
	Standard Structure (4 tracks)	Mile	\$	52,459,008												
2	High Structure	Mile	\$	40,424,448				\$ -				\$ -				\$ -
3	Long Span Structure	Mile	\$	61,919,232				\$ -				\$ -				\$ -
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$ -				\$ -				\$ -
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$ -				\$ -				\$ -
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$ -				\$ -				\$ -
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$ -				\$ -				\$ -
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$ -				\$ -				\$ -
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$ -			0.00	\$ -			0.00	\$ -
10	Double Track Mined (Soft Soil)	Mile	\$	792,000,000				\$ -				\$ -			0.76	\$ 601,200,000
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312											2.65	\$ 282,588,877
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896												
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$ -				\$ -				\$ -
12	Crossovers	ea	\$	442,368				\$ -				\$ -				\$ -
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$ -			0.00	\$ -			0.00	\$ -
14	Trench Long (2 tracks) (1000+ ft)	Mile	\$	57,524,224			0.00	\$ -			0.00	\$ -			0.00	\$ -
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336			3.41	\$ 294,157,964								
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$ -				\$ -				\$ -
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856												
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				\$ -			3.41	\$ 40,393,309			3.41	\$ 40,393,309
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$ -			0.00	\$ -			0.00	\$ -
18	Containment Walls	Mile	\$	5,907,456			0.00	\$ -				\$ -				\$ -
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$ -				\$ -				\$ -
	Four Track Drill & Blast	Mile	\$	293,775,360				\$ -				\$ -				\$ -
	Four Track Mined (Soft Soil)	Mile	\$	1,584,000,000				\$ -				\$ -				\$ -
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624											0.00	\$ -
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792												\$ -
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$ -			3.41	\$ 894,859,636			0.00	\$ -
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114												\$ -
Grade Separations																
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$ -				\$ -				\$ -
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$ -				\$ -				\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			4	\$ 11,038,720			4	\$ 11,038,720			4	\$ 11,038,720
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$ -				\$ -				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$ -				\$ -				\$ -



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (HST only)			
Subsection 4			Base: 2009 (3rd Quarter)		B2				B2				B2			
					Start: 1270 + 00	Start: 1450 + 00	3.41 Miles		Start: 1270 + 00	Start: 1450 + 00	3.41 Miles		Start: 1270 + 00	Start: 1450 + 00	3.41 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 1270 + 00	End: 1450 + 00	3.41 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$ -				\$ -				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$ -				\$ -				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$ -				\$ -				\$ -
7	Street Bridging HSR Trench	ea	\$	1,398,784			0	\$ -			0	\$ -			0	\$ -
8	Minor Crossing Closures	ea	\$	87,040				\$ -			0	\$ -			0	\$ -
Building Items																
1	Intermediate Passenger Stations	Each	\$	-				\$ -				\$ -				\$ -
2 Terminal Passenger Stations			Each	\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$	\$15,000,000				\$ -				\$ -				\$ -
	Caltrain Passenger Station - On Structure	Each	\$	\$15,000,000				\$ -				\$ -				\$ -
2	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	\$15,000,000				\$ -				\$ -			0	\$ -
	Caltrain Passenger Station - In Trench	Each	\$	\$15,000,000		2	30,000,000	\$ -		2	30,000,000	\$ -			0	\$ -
3	Maintenance Facility	Each	\$	123,921,884				\$ -				\$ -				\$ -
4	Parking - Structures	space	\$	-				\$ -				\$ -				\$ -
5	Parking - At Grade	space	\$	-				\$ -				\$ -				\$ -
Rail & Utility Relocation																
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -				\$ -				\$ -
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$ -				\$ -				\$ -
3	Single Track Removal	Mile	\$	130,048				\$ -				\$ -				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$ -				\$ -				\$ -
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$ -				\$ -				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$ -				\$ -				\$ -
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$ -				\$ -				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$ -				\$ -				\$ -
ROW (Not Included)																
ROW required for each segment																
1	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -				\$ -
2	Urban	Acre	\$	1,371,510				\$ -				\$ -				\$ -
3	Dense Suburban	Acre	\$	908,134				\$ -				\$ -				\$ -
4	Suburban	Acre	\$	208,418				\$ -				\$ -				\$ -
5	Undeveloped	Acre	\$	3,642				\$ -				\$ -				\$ -
ROW required for Temp. Construction Easement								\$ -				\$ -				\$ -
1	Dense Urban	Acre						\$ -				\$ -				\$ -
2	Urban	Acre						\$ -				\$ -				\$ -
3	Dense Suburban	Acre						\$ -				\$ -				\$ -
4	Suburban	Acre						\$ -				\$ -				\$ -
5	Undeveloped	Acre						\$ -				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities																
6	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -				\$ -
7	Urban	Acre	\$	1,371,510				\$ -				\$ -				\$ -
8	Dense Suburban	Acre	\$	908,134				\$ -				\$ -				\$ -
9	Suburban	Acre	\$	208,418				\$ -				\$ -				\$ -
10	Undeveloped	Acre	\$	3,642				\$ -				\$ -				\$ -
	Environmental Mitigation = 3% Line Costs							\$ 11,932,594				\$ 31,149,939				\$ 28,537,325
System Elements																
1	Signaling (ATC)	Mile	\$	2,070,000			3.41	\$ 7,056,818			3.41	\$ 7,056,818			3.41	\$ 7,056,818
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			3.41	\$ 1,840,909			3.41	\$ 1,840,909			3.41	\$ 1,840,909
3	Wayside Protection System	Mile	\$	108,000			3.41	\$ 368,182			3.41	\$ 368,182			3.41	\$ 368,182
Electrification Items																
1	Traction Power supply	Mile	\$	1,170,000			3.41	\$ 3,988,636			3.41	\$ 3,988,636			3.41	\$ 3,988,636
2	Traction Power Distribution	Mile	\$	1,485,000			3.41	\$ 5,062,500			3.41	\$ 5,062,500			3.41	\$ 5,062,500
Subtotal								\$ 428,002,789				\$ 1,087,798,286				\$ 998,098,549
Program Implementation Costs (per screening)								\$ 109,140,711				\$ 277,388,563				\$ 254,515,130
Program Implementation Costs																
Contingencies (per screening) (25%)								\$ 107,000,697				\$ 271,949,572				\$ 249,524,637
Subtotal								\$ 644,144,197				\$ 1,637,136,421				\$ 1,502,138,317
Subtotal (Rounded)								\$ 644,000,000				\$ 1,637,000,000				\$ 1,502,000,000



COST ELEMENTS				UNIT	UNIT PRICE	Aerial Viaduct (4 Tracks)				Aerial Viaduct (2 Tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)			
Subsection 4				Base: 2009 (3rd Quarter)		C				C				C				C			
						Start: 1450 + 00	Start: 1533 + 00	1.57 Miles		Start: 1450 + 00	Start: 1533 + 00	1.57 Miles		Start: 1450 + 00	Start: 1533 + 00	1.57 Miles		Start: 1450 + 00	Start: 1533 + 00	1.57 Miles	
Subsection Details								Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)						Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 1450 + 00	End: 1533 + 00	1.57 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)						Start: 1450 + 00	End: 1533 + 00	1.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1450 + 00	End: 1533 + 00	1.57 Miles	
Four Track Trench (Mile)						Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 1450 + 00	End: 1533 + 00	1.57 Miles		Start: 0 + 00		0.00 Miles	
	Double Track Section - Total																				
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-	
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00 \$	-			1.57 \$	7,388,509			0.00 \$	-			0.00 \$	-	
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-	
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-	
	Four Track Section - Total																				
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-	
	Four-Track Section - On Structure	Mile	\$	9,400,320			1.57 \$	14,777,018			0.00 \$	-			0 \$	-			0 \$	-	
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00 \$	-			0.00 \$	-			0 \$	-			1.57 \$	14,777,018	
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00 \$	-			0.00 \$	-			1.57 \$	14,777,018			0 \$	-	
	Single Track - Total																				
5	Single Track Section - At Grade	Mile	\$	1,549,312			0.00 \$	-			0.00 \$	-			0 \$	-			0 \$	-	
6	Single Track Section - On structure	Mile	\$	2,350,080			0.00 \$	-			0.00 \$	-			0 \$	-			0 \$	-	
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0.00 \$	-			0.00 \$	-			0 \$	-			0 \$	-	
8	Single Track Section - In Trench	Mile	\$	2,350,080			0.00 \$	-			0.00 \$	-			0 \$	-			0 \$	-	
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0.00 \$	-			0.00 \$	-			0 \$	-			0 \$	-	
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0.00 \$	-			0.00 \$	-			0 \$	-			0 \$	-	
	Earthwork Items																				
1	Site Preparation - Undeveloped	Acre	\$	9,216			0.00 \$	-			0.00 \$	-			20.96 \$	193,164			20.96 \$	193,164	
2	Total Cut	CY	\$	6.00			0.00 \$	-			0.00 \$	-			676296.30 \$	4,057,778			676296.30 \$	4,057,778	
3	Total Fill	CY	\$	6.00			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-	
4	Borrow	CY	\$	13.00			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-	
5	Spoil	CY	\$	13.00			0.00 \$	-			0.00 \$	-			676296.30 \$	8,791,852			676296.30 \$	8,791,852	
6	Landscape erosion Control	Acre	\$	6,144			0.00 \$	-			0.00 \$	-			20.96 \$	128,776			20.96 \$	128,776	
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00 \$	-			0.00 \$	-			1.57 \$	226,967			0.00 \$	-	
8	Special Drainage Facilities	5% Earthwork					\$	-			\$	-			\$	669,927			\$	658,578	
	Structures, Tunnels, Walls																				
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00 \$	-			1.57 \$	54,975,981			0.00 \$	-			0.00 \$	-	
	Standard Structure (4 tracks)	Mile	\$	52,459,008			1.57 \$	82,463,971													
2	High Structure	Mile	\$	40,424,448			\$	-			\$	-			\$	-			\$	-	
3	Long Span Structure	Mile	\$	61,919,232			\$	-			\$	-			\$	-			\$	-	
4	Waterway Crossing - Primary	Mile	\$	85,342,208			\$	-			\$	-			\$	-			\$	-	
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			\$	-			\$	-			\$	-			\$	-	
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$	-			\$	-			\$	-			\$	-	
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-			\$	-			\$	-			\$	-	
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			\$	-			\$	-			\$	-			\$	-	
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-	
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000			\$	-			\$	-			\$	-			\$	-	
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312																	
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																	
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$	-			\$	-			\$	-			\$	-	
12	Crossovers	ea	\$	442,368			\$	-			\$	-			\$	-			\$	-	
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-	
14	Trench Long (2 tracks) (1000+ ft)	Mile	\$	57,524,224			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-	
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336											1.57 \$	135,639,505					
	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904																	
15	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856			\$	-			\$	-			\$	-			\$	-	
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			\$	-			\$	-			\$	-			1.57 \$	18,625,804	
17	Retaining Walls	Mile	\$	8,613,888			0.00 \$	-			0.00 \$	-			0.00 \$	-			0.00 \$	-	
18	Containment Walls	Mile	\$	5,907,456			\$	-			\$	-			0.00 \$	-			\$	-	
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080			\$	-			\$	-			\$	-			\$	-	
	Four Track Drill & Blast	Mile	\$	293,775,360			\$	-			\$	-			\$	-			\$	-	
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000			\$	-			\$	-			\$	-			\$	-	
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624																	
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792																	
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00 \$	-			0.00 \$	-			0.00 \$	-			1.57 \$	412,629,721	
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																	
	Grade Separations																				
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352			\$	-			\$	-			\$	-			\$	-	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			0 \$	-			0 \$	-			\$	-			\$	-	
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			3 \$	8,279,040			3 \$	8,279,040			0 \$	-			0 \$	-	
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	-			\$	-			\$	-			\$	-	
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			\$	-			\$	-			3 \$	10,690,560			3 \$	10,690,560	



COST ELEMENTS			UNIT	UNIT PRICE	Aerial Viaduct (4 Tracks)				Aerial Viaduct (2 Tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)			
Subsection 4			Base: 2009 (3rd Quarter)	C				C				C				C				
				Start: 1450 + 00	Start: 1533 + 00	1.57 Miles		Start: 1450 + 00	Start: 1533 + 00	1.57 Miles		Start: 1450 + 00	Start: 1533 + 00	1.57 Miles		Start: 1450 + 00	Start: 1533 + 00	1.57 Miles		
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)				Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 1450 + 00	End: 1533 + 00	1.57 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)				Start: 1450 + 00	End: 1533 + 00	1.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1450 + 00	End: 1533 + 00	1.57 Miles		
Four Track Trench (Mile)				Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 1450 + 00	End: 1533 + 00	1.57 Miles		Start: 0 + 00		0.00 Miles		
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			\$	-			\$	-			\$	-			\$	-
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			\$	-			\$	-			\$	-			\$	-
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328			\$	-			\$	-			\$	-			\$	-
7	Street Bridging HSR Trench	ea	\$	1,398,784			\$	-			\$	-		0	\$	-		0	\$	-
8	Minor Crossing Closures	ea	\$	87,040			\$	-			\$	-			\$	-		0	\$	-
Building Items																				
1	Intermediate Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-			\$	-
2	Terminal Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000			\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000		1	\$	15,000,000		1	\$	15,000,000			\$	-			\$	-
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000			\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000			\$	-			\$	-		1	\$	15,000,000		1	\$	15,000,000
3	Maintenance Facility	Each	\$	123,921,884			\$	-			\$	-			\$	-			\$	-
4	Parking - Structures	space	\$	-			\$	-			\$	-			\$	-			\$	-
5	Parking - At Grade	space	\$	-			\$	-			\$	-			\$	-			\$	-
Rail & Utility Relocation																				
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896			\$	-			\$	-			\$	-			\$	-
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896			\$	-			\$	-			\$	-			\$	-
3	Single Track Removal	Mile	\$	130,048			\$	-			\$	-			\$	-			\$	-
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288			\$	-			\$	-			\$	-			\$	-
5	Major Utility Relocations - Urban	Mile	\$	1,084,416			\$	-			\$	-			\$	-			\$	-
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168			\$	-			\$	-			\$	-			\$	-
7	Major Utility Relocations - Suburban	Mile	\$	464,896			\$	-			\$	-			\$	-			\$	-
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720			\$	-			\$	-			\$	-			\$	-
ROW (Not Included)																				
ROW required for each segment																				
1	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-			\$	-
2	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-			\$	-
3	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-			\$	-
4	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-			\$	-
5	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-			\$	-
ROW required for Temp. Construction Easement							\$	-			\$	-			\$	-			\$	-
1	Dense Urban	Acre					B			B										
2	Urban	Acre					\$	-			\$	-			\$	-			\$	-
3	Dense Suburban	Acre					\$	-			\$	-			\$	-			\$	-
4	Suburban	Acre					\$	-			\$	-			\$	-			\$	-
5	Undeveloped	Acre					\$	-			\$	-			\$	-			\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities																				
6	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-			\$	-
7	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-			\$	-
8	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-			\$	-
9	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-			\$	-
10	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-			\$	-
Environmental Mitigation = 3% Line Costs							\$	3,615,601			\$	2,569,306			\$	5,705,266			\$	14,566,598
System Elements																				
1	Signaling (ATC)	Mile	\$	2,070,000		1.57	\$	3,253,977		1.57	\$	3,253,977		1.57	\$	3,253,977		1.57	\$	3,253,977
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000		1.57	\$	848,864		1.57	\$	848,864		1.57	\$	848,864		1.57	\$	848,864
3	Wayside Protection System	Mile	\$	108,000		1.57	\$	169,773		1.57	\$	169,773		1.57	\$	169,773		1.57	\$	169,773
Electrification Items																				
1	Traction Power supply	Mile	\$	1,170,000		1.57	\$	1,839,205		1.57	\$	1,839,205		1.57	\$	1,839,205		1.57	\$	1,839,205
2	Traction Power Distribution	Mile	\$	1,485,000		1.57	\$	2,334,375		1.57	\$	2,334,375		1.57	\$	2,334,375		1.57	\$	2,334,375
Subtotal							\$	132,581,823			\$	96,659,029			\$	204,327,006			\$	508,566,041
Program Implementation Costs (per screening)							\$	33,808,365			\$	24,648,052			\$	52,103,387			\$	129,684,341
Program Implementation Costs																				
Contingencies (per screening) (25%)							\$	33,145,456			\$	24,164,757			\$	51,081,752			\$	127,141,510
Subtotal							\$	199,535,644			\$	145,471,838			\$	307,512,145			\$	765,391,892
Subtotal (Rounded)							\$	200,000,000			\$	145,000,000			\$	308,000,000			\$	765,000,000



COST ELEMENTS		UNIT	UNIT PRICE	Tunnel (HST only)			
Subsection 4		Base: 2009 (3rd Quarter)		C			
				Start: 1450 + 00	Start: 1533 + 00	1.57 Miles	
Subsection Details						Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 1450 + 00	End: 1533 + 00	1.57 Miles	
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Section - Total							
1 Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$ -
2 Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			1.57	\$ 7,388,509
4 Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$ -
Four Track Section - Total							
Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$ -
Four-Track Section - On Structure	Mile	\$	9,400,320			0	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0	\$ -
Four-Track Section - In Trench	Mile	\$	9,400,320			0	\$ -
Single Track - Total							
5 Single Track Section - At Grade	Mile	\$	1,549,312			0	\$ -
6 Single Track Section - On structure	Mile	\$	2,350,080			0	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$ -
8 Single Track Section - In Trench	Mile	\$	2,350,080			0	\$ -
9 Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$ -
10 Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$ -
Earthwork Items							
1 Site Preparation - Undeveloped	Acre	\$	9,216			0.00	\$ -
2 Total Cut	CY	\$	6.00			0.00	\$ -
3 Total Fill	CY	\$	6.00			0.00	\$ -
4 Borrow	CY	\$	13.00			0.00	\$ -
5 Spoil	CY	\$	13.00			0.00	\$ -
6 Landscape erosion Control	Acre	\$	6,144			0.00	\$ -
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$ -
8 Special Drainage Facilities	5% Earthwork					\$	\$ -
Structures, Tunnels, Walls							
1 Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$ -
Standard Structure (4 tracks)	Mile	\$	52,459,008				
2 High Structure	Mile	\$	40,424,448			\$	\$ -
3 Long Span Structure	Mile	\$	61,919,232			\$	\$ -
4 Waterway Crossing - Primary	Mile	\$	85,342,208			\$	\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			\$	\$ -
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$	\$ -
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			0.00	\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			0.00	\$ -
9 Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$ -
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000			0.00	\$ -
Double Track TBM (<6 Miles)	Mile	\$	106,637,312			1.57	\$ 167,630,623
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896				
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$	\$ -
12 Crossovers	ea	\$	442,368			\$	\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$ -
14 Trench Long (2 tracks) (1000+ ft)	Mile	\$	57,524,224			0.00	\$ -
Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336				
Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				
15 Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856			\$	\$ -
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			1.57	\$ 18,625,804
17 Retaining Walls	Mile	\$	8,613,888			0.00	\$ -
18 Containment Walls	Mile	\$	5,907,456			\$	\$ -
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080			\$	\$ -
Four Track Drill & Blast	Mile	\$	293,775,360			\$	\$ -
Four Track Mined (Soft Soil)	Mile	\$	158,400,000			0.00	\$ -
Four Track TBM (<6 Miles)	Mile	\$	213,274,624			0.00	\$ -
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792			\$	\$ -
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$ -
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114				
Grade Separations							
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352			\$	\$ -
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			\$	\$ -
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			0	\$ -
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	\$ -
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			0	\$ -



COST ELEMENTS		UNIT	UNIT PRICE	Tunnel (HST only)			
Subsection 4			Base: 2009 (3rd Quarter)	C			
				Start: 1450 + 00	Start: 1533 + 00	1.57 Miles	
Subsection Details						Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 1450 + 00	End: 1533 + 00	1.57 Miles	
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -
7	Street Bridging HSR Trench	ea	\$ 1,398,784			0	\$ -
8	Minor Crossing Closures	ea	\$ 87,040			0	\$ -
Building Items							
1	Intermediate Passenger Stations	Each	\$ -				\$ -
Terminal Passenger Stations		Each	\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000			1	\$ 15,000,000
	Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -
3	Maintenance Facility	Each	\$ 123,921,884				\$ -
4	Parking - Structures	space	\$ -				\$ -
5	Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation							
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -
3	Single Track Removal	Mile	\$ 130,048				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
ROW (Not Included)							
ROW required for each segment							
1	Dense Urban	Acre	\$ 2,786,321				\$ -
2	Urban	Acre	\$ 1,371,510				\$ -
3	Dense Suburban	Acre	\$ 908,134				\$ -
4	Suburban	Acre	\$ 208,418				\$ -
5	Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement							\$ -
1	Dense Urban	Acre					\$ -
2	Urban	Acre					\$ -
3	Dense Suburban	Acre					\$ -
4	Suburban	Acre					\$ -
5	Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities							
6	Dense Urban	Acre	\$ 2,786,321				\$ -
7	Urban	Acre	\$ 1,371,510				\$ -
8	Dense Suburban	Acre	\$ 908,134				\$ -
9	Suburban	Acre	\$ 208,418				\$ -
10	Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs							\$ 6,259,348
System Elements							
1	Signaling (ATC)	Mile	\$ 2,070,000			1.57	\$ 3,253,977
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.57	\$ 848,864
3	Wayside Protection System	Mile	\$ 108,000			1.57	\$ 169,773
Electrification Items							
1	Traction Power supply	Mile	\$ 1,170,000			1.57	\$ 1,839,205
2	Traction Power Distribution	Mile	\$ 1,485,000			1.57	\$ 2,334,375
Subtotal							\$ 223,350,477
Program Implementation Costs (per screening)							\$ 56,954,372
Program Implementation Costs							
Contingencies (per screening) (25%)							\$ 55,837,619
Subtotal							\$ 336,142,468
Subtotal (Rounded)							\$ 336,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Aerial Viaduct (2 tracks) (HST only)				At-Grade (2 tracks) (CALTRAIN only)				At-Grade (4 tracks)				Open Trench (2 tracks) (HST only)			
Subsection 4			Base: 2009 (3rd Quarter)	D				D				D				D				
				Start: 1533 + 00	Start: 1565 + 00	0.61 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 1533 + 00	Start: 1565 + 00	0.61 Miles		
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)				Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)				Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Trench (Mile)				Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Section - Total																				
1	Double Track Section - At Grade	Mile	\$	2,100,224		0.00	\$	-		0.61	\$	1,272,863		0.00	\$	-		0.00	\$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160		0.61	\$	2,848,582		0.00	\$	-		0.00	\$	-		0.00	\$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
4	Double Track Section - In Trench	Mile	\$	4,700,160		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.61	\$	2,848,582
Four Track Section - Total																				
	Four-track Section - At Grade	Mile	\$	4,200,448		0.00	\$	-		0.00	\$	-		0.61	\$	2,545,726		0.00	\$	-
	Four-Track Section - On Structure	Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-		0.00	\$	-		0	\$	-
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-		0.00	\$	-		0	\$	-
	Four-Track Section - In Trench	Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
Single Track - Total																				
5	Single Track Section - At Grade	Mile	\$	1,549,312		0.00	\$	-		0.00	\$	-		0.00	\$	-		0	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080		0.00	\$	-		0.00	\$	-		0.00	\$	-		0	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080		0.00	\$	-		0.00	\$	-		0.00	\$	-		0	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080		0.00	\$	-		0.00	\$	-		0.00	\$	-		0	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552		0.00	\$	-		0.00	\$	-		0.00	\$	-		0	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312		0.00	\$	-		0.00	\$	-		0.00	\$	-		0	\$	-
Earthwork Items																				
1	Site Preparation - Undeveloped	Acre	\$	9,216		0.00	\$	-		0.00	\$	-		0.00	\$	-		8.08	\$	74,473
2	Total Cut	CY	\$	6.00		0.00	\$	-		0.00	\$	-		0.00	\$	-		260740.74	\$	1,564,444
3	Total Fill	CY	\$	6.00		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
4	Borrow	CY	\$	13.00		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
5	Spoil	CY	\$	13.00		0.00	\$	-		0.00	\$	-		0.00	\$	-		260740.74	\$	3,389,630
6	Landscape erosion Control	Acre	\$	6,144		0.00	\$	-		0.00	\$	-		0.00	\$	-		8.08	\$	49,648
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384		0.00	\$	-		0.00	\$	-		0.61	\$	87,505		0.61	\$	87,505
8	Special Drainage Facilities	5% Earthwork					\$	-			\$	-			\$	4,375			\$	258,285
Structures, Tunnels, Walls																				
1	Standard Structure (2 tracks)	Mile	\$	34,972,672		0.61	\$	21,195,559		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008																
2	High Structure	Mile	\$	40,424,448			\$	-			\$	-			\$	-			\$	-
3	Long Span Structure	Mile	\$	61,919,232			\$	-			\$	-			\$	-			\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208																
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			\$	-			\$	-			\$	-			\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$	-			\$	-			\$	-			\$	-
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-			\$	-			\$	-			\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			\$	-			\$	-			\$	-			\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000			\$	-			\$	-			\$	-			\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312																
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$	-			\$	-			\$	-			\$	-
12	Crossovers	ea	\$	442,368			\$	-			\$	-			\$	-			\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
14	Trench Long (2 tracks) (1000+ ft)	Mile	\$	57,524,224		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.61	\$	34,863,166
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336																
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904			\$	-			\$	-			\$	-			\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			\$	-			\$	-			\$	-			\$	-
17	Retaining Walls	Mile	\$	8,613,888		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
18	Containment Walls	Mile	\$	5,907,456			\$	-			\$	-			\$	-			\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080			\$	-			\$	-			\$	-			\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360			\$	-			\$	-			\$	-			\$	-
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000			\$	-			\$	-			\$	-			\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624																
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792																
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																
Grade Separations																				
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352		1	\$	13,284,352			\$	-			\$	-			\$	-
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528		0	\$	-		0	\$	-		0	\$	-			\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680		0	\$	-		0	\$	-		0	\$	-		0	\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	-			\$	-			\$	-			\$	-
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			\$	-			\$	-			\$	-			\$	-



COST ELEMENTS			UNIT	UNIT PRICE	Aerial Viaduct (2 tracks) (HST only)				At-Grade (2 tracks) (CALTRAIN only)				At-Grade (4 tracks)				Open Trench (2 tracks) (HST only)			
Subsection 4			Base: 2009 (3rd Quarter)	D				D				D				D				
				Start: 1533 + 00	Start: 1565 + 00	0.61 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 1533 + 00	Start: 1565 + 00	0.61 Miles		
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)				Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)				Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Trench (Mile)				Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			\$	-		\$	-			\$	-			\$	-	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			\$	-		\$	-			\$	-			\$	-	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328			\$	-		\$	-			\$	-			\$	-	
7	Street Bridging HSR Trench	ea	\$	1,398,784			\$	-		\$	-			\$	-		0	\$	-	
8	Minor Crossing Closures	ea	\$	87,040			\$	-		\$	-			\$	-			\$	-	
Building Items																				
1	Intermediate Passenger Stations	Each	\$	-			\$	-		\$	-			\$	-			\$	-	
Terminal Passenger Stations																				
2	Caltrain Passenger Station - At-Grade	Each	\$	-			\$	-		\$	-			\$	-			\$	-	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000			\$	-		\$	-			\$	-			\$	-	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000			\$	-		\$	-			\$	-			\$	-	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000			\$	-		\$	-			\$	-			\$	-	
3	Maintenance Facility	Each	\$	123,921,884			\$	-		\$	-			\$	-			\$	-	
4	Parking - Structures	space	\$	-			\$	-		\$	-			\$	-			\$	-	
5	Parking - At Grade	space	\$	-			\$	-		\$	-			\$	-			\$	-	
Rail & Utility Relocation																				
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896			\$	-		\$	-			\$	-			\$	-	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896			\$	-		\$	-			\$	-			\$	-	
Single Track Removal																				
3	Major Utility Relocations - Dense Urban	Mile	\$	130,048			\$	-		\$	-			\$	-			\$	-	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288			\$	-		\$	-			\$	-			\$	-	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416			\$	-		\$	-			\$	-			\$	-	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168			\$	-		\$	-			\$	-			\$	-	
7	Major Utility Relocations - Suburban	Mile	\$	464,896			\$	-		\$	-			\$	-			\$	-	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720			\$	-		\$	-			\$	-			\$	-	
ROW (Not Included)																				
ROW required for each segment																				
1	Dense Urban	Acre	\$	2,786,321			\$	-		\$	-			\$	-			\$	-	
2	Urban	Acre	\$	1,371,510			\$	-		\$	-			\$	-			\$	-	
3	Dense Suburban	Acre	\$	908,134			\$	-		\$	-			\$	-			\$	-	
4	Suburban	Acre	\$	208,418			\$	-		\$	-			\$	-			\$	-	
5	Undeveloped	Acre	\$	3,642			\$	-		\$	-			\$	-			\$	-	
ROW required for Temp. Construction Easement							\$	-		\$	-			\$	-			\$	-	
1	Dense Urban	Acre					B			B				B				\$	-	
2	Urban	Acre					\$	-		\$	-			\$	-			\$	-	
3	Dense Suburban	Acre					\$	-		\$	-			\$	-			\$	-	
4	Suburban	Acre					\$	-		\$	-			\$	-			\$	-	
5	Undeveloped	Acre					\$	-		\$	-			\$	-			\$	-	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																				
6	Dense Urban	Acre	\$	2,786,321			\$	-		\$	-			\$	-			\$	-	
7	Urban	Acre	\$	1,371,510			\$	-		\$	-			\$	-			\$	-	
8	Dense Suburban	Acre	\$	908,134			\$	-		\$	-			\$	-			\$	-	
9	Suburban	Acre	\$	208,418			\$	-		\$	-			\$	-			\$	-	
10	Undeveloped	Acre	\$	3,642			\$	-		\$	-			\$	-			\$	-	
Environmental Mitigation = 3% Line Costs							\$	1,119,855		\$	38,186			\$	79,128			\$	1,294,072	
System Elements																				
1	Signaling (ATC)	Mile	\$	2,070,000		0.61	\$	1,254,545		0.61	\$	1,254,545		0.61	\$	1,254,545		0.61	\$	1,254,545
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000		0.61	\$	327,273		0.61	\$	327,273		0.61	\$	327,273		0.61	\$	327,273
3	Wayside Protection System	Mile	\$	108,000		0.61	\$	65,455		0.61	\$	65,455		0.61	\$	65,455		0.61	\$	65,455
Electrification Items																				
1	Traction Power supply	Mile	\$	1,170,000		0.61	\$	709,091		0.61	\$	709,091		0.61	\$	709,091		0.61	\$	709,091
2	Traction Power Distribution	Mile	\$	1,485,000		0.61	\$	900,000		0.61	\$	900,000		0.61	\$	900,000		0.61	\$	900,000
Program Implementation Costs (per screening)							\$	41,704,711		\$	4,567,413		\$	5,973,099		\$	47,686,169		\$	47,686,169
Program Implementation Costs							\$	10,634,701		\$	1,164,690		\$	1,523,140		\$	12,159,973		\$	12,159,973
Contingencies (per screening) (25%)							\$	10,426,178		\$	1,141,853		\$	1,493,275		\$	11,921,542		\$	11,921,542
Subtotal							\$	62,765,590		\$	6,873,956		\$	8,989,513		\$	71,767,685		\$	71,767,685
Subtotal (Rounded)							\$	63,000,000		\$	7,000,000		\$	9,000,000		\$	72,000,000		\$	72,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (4 tracks)				Covered Trench (HST only)				Covered Trench (4 tracks)				Tunnel (HST only)			
Subsection 4			Base: 2009 (3rd Quarter)	D				D				D				D				
				Start: 1533 + 00	Start: 1565 + 00	0.61 Miles		Start: 1533 + 00	Start: 1565 + 00	0.61 Miles		Start: 1533 + 00	Start: 1565 + 00	0.61 Miles		Start: 1533 + 00	Start: 1565 + 00	0.61 Miles		
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)				Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		
Double Track Trench (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)				Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Section - Total																				
1	Double Track Section - At Grade	Mile	\$	2,100,224		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160		0.00	\$	-		0.61	\$	2,848,582		0.00	\$	-		0.61	\$	2,848,582
4	Double Track Section - In Trench	Mile	\$	4,700,160		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
Four Track Section - Total																				
	Four-track Section - At Grade	Mile	\$	4,200,448		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Four-Track Section - On Structure	Mile	\$	9,400,320		0	\$	-		0	\$	-		0	\$	-		0	\$	-
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320		0	\$	-		0.00	\$	-		0.61	\$	5,697,164		0.00	\$	-
	Four-Track Section - In Trench	Mile	\$	9,400,320		0.61	\$	5,697,164		0	\$	-		0	\$	-		0	\$	-
Single Track - Total																				
5	Single Track Section - At Grade	Mile	\$	1,549,312		0	\$	-		0	\$	-		0	\$	-		0	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080		0	\$	-		0	\$	-		0	\$	-		0	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080		0	\$	-		0	\$	-		0	\$	-		0	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080		0	\$	-		0	\$	-		0	\$	-		0	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552		0	\$	-		0	\$	-		0	\$	-		0	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312		0	\$	-		0	\$	-		0	\$	-		0	\$	-
Earthwork Items																				
1	Site Preparation - Undeveloped	Acre	\$	9,216		0.00	\$	-		8.08	\$	74,473		0.00	\$	-		0.00	\$	-
2	Total Cut	CY	\$	6.00		260740.74	\$	1,564,444		260740.74	\$	1,564,444		260740.74	\$	1,564,444		0.00	\$	-
3	Total Fill	CY	\$	6.00		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
4	Borrow	CY	\$	13.00		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
5	Spoil	CY	\$	13.00		260740.74	\$	3,389,630		260740.74	\$	3,389,630		260740.74	\$	3,389,630		0.00	\$	-
6	Landscape erosion Control	Acre	\$	6,144		8.08	\$	49,648		8.08	\$	49,648		8.08	\$	49,648		0.00	\$	-
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384		0.61	\$	87,505		0.61	\$	87,505		0.61	\$	87,505		0.00	\$	-
8	Special Drainage Facilities	5% Earthwork					\$	254,561			\$	258,285			\$	254,561			\$	-
Structures, Tunnels, Walls																				
1	Standard Structure (2 tracks)	Mile	\$	34,972,672		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008																
2	High Structure	Mile	\$	40,424,448			\$	-			\$	-			\$	-			\$	-
3	Long Span Structure	Mile	\$	61,919,232			\$	-			\$	-			\$	-			\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208			\$	-			\$	-			\$	-			\$	-
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			\$	-			\$	-			\$	-			\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$	-			\$	-			\$	-			\$	-
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-			\$	-			\$	-			\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			\$	-			\$	-			\$	-			\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000			\$	-			\$	-			\$	-			\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312													0.61	\$	64,628,674	
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$	-			\$	-			\$	-			\$	-
12	Crossovers	ea	\$	442,368			\$	-			\$	-			\$	-			\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080		0.00	\$	-		0.61	\$	79,543,079		0.00	\$	-		0.00	\$	-
14	Trench Long (2 tracks) (1000+ ft)	Mile	\$	57,524,224		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Trench Long (4 tracks) (1000 + ft)	Mile	\$	86,286,336		0.61	\$	52,294,749												
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904			\$	-			\$	-			\$	-			\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			\$	-		0.61	\$	7,181,033		0.61	\$	7,181,033		0.61	\$	7,181,033
17	Retaining Walls	Mile	\$	8,613,888		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
18	Containment Walls	Mile	\$	5,907,456		0.00	\$	-			\$	-			\$	-			\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080			\$	-			\$	-			\$	-			\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360			\$	-			\$	-			\$	-			\$	-
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000			\$	-			\$	-			\$	-		0.00	\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624													0.00	\$	-	
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792														\$	-	
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160		0.00	\$	-		0.00	\$	-		0.61	\$	159,086,158		0.00	\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																
Grade Separations																				
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352			\$	-			\$	-			\$	-			\$	-
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			\$	-			\$	-			\$	-			\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680		0	\$	-		0	\$	-		0	\$	-		0	\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	-			\$	-			\$	-			\$	-
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			\$	-			\$	-			\$	-			\$	-



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (4 tracks)				Covered Trench (HST only)				Covered Trench (4 tracks)				Tunnel (HST only)				
Subsection 4			Base: 2009 (3rd Quarter)	D				D				D				D					
				Start: 1533 + 00	Start: 1565 + 00	0.61 Miles		Start: 1533 + 00	Start: 1565 + 00	0.61 Miles		Start: 1533 + 00	Start: 1565 + 00	0.61 Miles		Start: 1533 + 00	Start: 1565 + 00	0.61 Miles			
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)				Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles			
Double Track Trench (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)				Start: 1533 + 00	End: 1565 + 00	0.61 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216						\$	-			\$	-			\$	-		
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816						\$	-			\$	-			\$	-		
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328						\$	-			\$	-			\$	-		
7	Street Bridging HSR Trench	ea	\$	1,398,784		0	\$	-		0	\$	-		0	\$	-		0	\$	-	
8	Minor Crossing Closures	ea	\$	87,040						0	\$	-		0	\$	-		0	\$	-	
Building Items																					
1	Intermediate Passenger Stations	Each	\$	-				\$	-			\$	-			\$	-			\$	-
2 Terminal Passenger Stations			Each	\$	-			\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-			\$	-			\$	-			\$	-
3	Maintenance Facility	Each	\$	123,921,884				\$	-			\$	-			\$	-			\$	-
4	Parking - Structures	space	\$	-				\$	-			\$	-			\$	-			\$	-
5	Parking - At Grade	space	\$	-				\$	-			\$	-			\$	-			\$	-
Rail & Utility Relocation																					
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-			\$	-			\$	-			\$	-
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-			\$	-			\$	-			\$	-
3 Single Track Removal			Mile	\$	130,048			\$	-			\$	-			\$	-			\$	-
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-			\$	-			\$	-			\$	-
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-			\$	-			\$	-			\$	-
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-			\$	-			\$	-			\$	-
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-			\$	-			\$	-			\$	-
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-			\$	-			\$	-			\$	-
ROW (Not Included)																					
ROW required for each segment																					
1	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-			\$	-			\$	-
2	Urban	Acre	\$	1,371,510				\$	-			\$	-			\$	-			\$	-
3	Dense Suburban	Acre	\$	908,134				\$	-			\$	-			\$	-			\$	-
4	Suburban	Acre	\$	208,418				\$	-			\$	-			\$	-			\$	-
5	Undeveloped	Acre	\$	3,642				\$	-			\$	-			\$	-			\$	-
ROW required for Temp. Construction Easement								\$	-			\$	-			\$	-			\$	-
1	Dense Urban	Acre						\$	-			\$	-			\$	-			\$	-
2	Urban	Acre						\$	-			\$	-			\$	-			\$	-
3	Dense Suburban	Acre						\$	-			\$	-			\$	-			\$	-
4	Suburban	Acre						\$	-			\$	-			\$	-			\$	-
5	Undeveloped	Acre						\$	-			\$	-			\$	-			\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities																					
6	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-			\$	-			\$	-
7	Urban	Acre	\$	1,371,510				\$	-			\$	-			\$	-			\$	-
8	Dense Suburban	Acre	\$	908,134				\$	-			\$	-			\$	-			\$	-
9	Suburban	Acre	\$	208,418				\$	-			\$	-			\$	-			\$	-
10	Undeveloped	Acre	\$	3,642				\$	-			\$	-			\$	-			\$	-
Environmental Mitigation = 3% Line Costs							\$	1,900,131			\$	2,849,900			\$	5,319,304			\$	2,239,749	
System Elements																					
1	Signaling (ATC)	Mile	\$	2,070,000		0.61	\$	1,254,545		0.61	\$	1,254,545		0.61	\$	1,254,545		0.61	\$	1,254,545	
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000		0.61	\$	327,273		0.61	\$	327,273		0.61	\$	327,273		0.61	\$	327,273	
3	Wayside Protection System	Mile	\$	108,000		0.61	\$	65,455		0.61	\$	65,455		0.61	\$	65,455		0.61	\$	65,455	
Electrification Items																					
1	Traction Power supply	Mile	\$	1,170,000		0.61	\$	709,091		0.61	\$	709,091		0.61	\$	709,091		0.61	\$	709,091	
2	Traction Power Distribution	Mile	\$	1,485,000		0.61	\$	900,000		0.61	\$	900,000		0.61	\$	900,000		0.61	\$	900,000	
Subtotal							\$	68,494,197			\$	101,102,943			\$	185,885,811			\$	80,154,401	
Program Implementation Costs (per screening)							\$	17,466,020			\$	25,781,250			\$	47,400,882			\$	20,439,372	
Program Implementation Costs																					
Contingencies (per screening) (25%)							\$	17,123,549			\$	25,275,736			\$	46,471,453			\$	20,038,600	
Subtotal							\$	103,083,766			\$	152,159,929			\$	279,758,146			\$	120,632,373	
Subtotal (Rounded)							\$	103,000,000			\$	152,000,000			\$	280,000,000			\$	121,000,000	



Subsection 5	5A (0.8 miles)					5B (1.7 miles)					
	Aerial Viaduct (HST Only)	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Hybrid
Capital Cost (\$2009 in Millions) does not include ROW	\$100 (2 tracks)	\$11 (4 tracks) \$9 (2 tracks)	\$223 (4 tracks); \$171 (2 tracks)	\$402 (4 tracks)	\$151 (2 tracks)	\$224 (4 tracks) \$166 (2 tracks)	\$98 (4 tracks) \$46 (2 tracks)	\$362 (4 tracks) \$273 (2 tracks)	\$848 (4 tracks) \$488 (2 tracks)	\$524 (2 tracks)	\$797-1,058 (4 tracks)
Acquisition Cost of Permanent ROW	Medium	Highest	Highest	Highest	Lowest	Medium	Highest	Medium	Lowest	Lowest	Lowest
Notes:	<b>2 tracks (2 HST)-</b> 1. Two tracks on existing Caltrain alignment. 2. <i>Must be combined with 2 track at grade option.</i>	<b>4 tracks -</b> 1. Four tracks on existing Caltrain alignment. 2. Existing 4-track alignment. <b>2 tracks (2 HST)-</b> 1. Two tracks on existing Caltrain alignment. 2. <i>Must be combined with 2 track aerial or deep tunnel option.</i>	<b>4 tracks -</b> 1. Lower Dumbarton Branch Line (3000'), Lower Port of Redwood City Spur (6000')	<b>4 tracks -</b> 1. Lower Dumbarton Branch Line (3000'), Lower Port of Redwood City Spur (6000')	<b>2 tracks -</b> 1. <i>Must be combined with 2 track at grade option.</i>	<b>4 tracks -</b> 1. Caltrain Atherton and Menlo Park stations; <b>2 tracks -</b> 1. Caltrain Atherton and Menlo Park stations. 2. <i>Must be combined with 2 track deep tunnel option.</i>	<b>4 tracks -</b> 1. Caltrain Atherton and Menlo Park stations; 2. Grade separations at Fair Oaks Lane, Watkins Ave, Encinal Ave, Glenwood Ave, Oak Grove Ave, and Ravenswood Ave. <b>2 tracks -</b> 1. Grade separations at Fair Oaks Lane, Watkins Ave, Encinal Ave, Glenwood Ave, Oak Grove Ave, and Ravenswood Ave. 2. <i>Must be combined with 2 track deep tunnel option.</i>	<b>4 tracks -</b> 1. Caltrain Atherton and Menlo Park stations; <b>2 tracks -</b> 1. Caltrain Atherton and Menlo Park stations; 2. <i>Must be combined with 2 track deep tunnel option.</i> 3. <i>Must be combined with 2 track deep tunnel for a hybrid option.</i>	<b>4 tracks -</b> 1. Caltrain Atherton and Menlo Park stations; <b>2 tracks -</b> 1. Caltrain Atherton and Menlo Park stations; 2. <i>Must be combined with 2 track deep tunnel option.</i>	<b>2 tracks -</b> 1. <i>Must be combined with 2 track aerial viaduct, at grade, trench, or tunnel option.</i> 2. <i>Must be combined with 2 track trench for a hybrid option.</i>	<b>4 tracks -</b> 1. Caltrain Atherton and Menlo Park stations;



Subsection 5	5C (1.0 miles)				
	At-Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Hybrid
Capital Cost (\$2009 in Millions) does not include ROW	\$20 (4 tracks) \$16 (2 tracks)	\$302 (4 tracks) \$233 (2 tracks)	\$623 (4 tracks) \$646 (2 tracks)	\$408 (2 tracks)	\$641-786 (4 tracks)
Acquisition Cost of Permanent ROW	Highest	Medium	Lowest	Lowest	Lowest
Notes:	<b>4 tracks -</b> No notes. <b>2 tracks -</b> 1. <i>Must be combined with 2 track deep tunnel option.</i>	<b>4 tracks -</b> No notes; <b>2 tracks -</b> 1. <i>Must be combined with 2 track deep tunnel for a hybrid option.</i>	<b>4 tracks -</b> No notes. <b>2 tracks -</b> 1. <i>Must be combined with 2 track deep tunnel option.</i>	<b>2 tracks -</b> 1. <i>Must be combined with 2 track at grade, trench, or tunnel option.</i> 2. <i>Must be combined with 2 track trench for a hybrid option.</i>	<b>4 tracks -</b> No notes.



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 tracks)				At-Grade (4 tracks)				Aerial (2 tracks)				Open Trench (2 tracks)			
Subsection 5			Base: 2009 (3rd Quarter)		A				A				A				A			
					Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 1565 + 00	Start: 1605 + 00	0.76 Miles		Start: 1565 + 00	Start: 1605 + 00	0.76 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1565 + 00	End: 1605 + 00	0.76 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total																				
1 Double Track Section - At Grade	Mile	\$	2,100,224				0.76	\$ 1,591,079			0.00	\$ -			0.00	\$ -			0.00	\$ -
2 Double Track Section - On Structure	Mile	\$	4,700,160				0.00	\$ -			0.00	\$ -			0.76	\$ 3,560,727			0.00	\$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
4 Double Track Section - In Trench	Mile	\$	4,700,160				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.76	\$ 3,560,727
Four Track Section - Total																				
Four-track Section - At Grade	Mile	\$	4,200,448				0.00	\$ -			0.76	\$ 3,182,158			0.00	\$ -			0.00	\$ -
Four-Track Section - On Structure	Mile	\$	9,400,320				0	\$ -			0	\$ -			0.00	\$ -			0	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0	\$ -			0	\$ -			0.00	\$ -			0	\$ -
Four-Track Section - In Trench	Mile	\$	9,400,320				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
Single Track - Total																				
5 Single Track Section - At Grade	Mile	\$	1,549,312				0	\$ -			0	\$ -			0.00	\$ -			0	\$ -
6 Single Track Section - On structure	Mile	\$	2,350,080				0	\$ -			0	\$ -			0.00	\$ -			0	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0	\$ -			0	\$ -			0.00	\$ -			0	\$ -
8 Single Track Section - In Trench	Mile	\$	2,350,080				0	\$ -			0	\$ -			0.00	\$ -			0	\$ -
9 Freight Double Track - At Grade	Mile	\$	2,839,552				0	\$ -			0	\$ -			0.00	\$ -			0	\$ -
10 Freight Single Track - At Grade	Mile	\$	1,549,312				0	\$ -			0	\$ -			0.00	\$ -			0	\$ -
Earthwork Items																				
1 Site Preparation - Undeveloped	Acre	\$	9,216				6.31	\$ 58,153			6.31	\$ 58,153			26.52	\$ 244,408			10.10	\$ 93,091
2 Total Cut	CY	\$	6.00				0.00	\$ -			0.00	\$ -			0.00	\$ -			651851.85	\$ 3,911,111
3 Total Fill	CY	\$	6.00				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
4 Borrow	CY	\$	13.00				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
5 Spoil	CY	\$	13.00				0.00	\$ -			0.00	\$ -			0.00	\$ -			651851.85	\$ 8,474,074
6 Landscape erosion Control	Acre	\$	6,144				6.31	\$ 38,769			6.31	\$ 38,769			26.52	\$ 162,939			10.10	\$ 62,061
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.76	\$ 109,382			0.76	\$ 109,382			0.00	\$ -			0.76	\$ 109,382
8 Special Drainage Facilities	5% Earthwork						\$	10,315			\$	10,315			\$	20,367			\$	632,486
Structures, Tunnels, Walls																				
1 Standard Structure (2 tracks)	Mile	\$	34,972,672				0.00	\$ -			0.00	\$ -			0.76	\$ 26,494,448			0.00	\$ -
Standard Structure (4 tracks)	Mile	\$	52,459,008				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
2 High Structure	Mile	\$	40,424,448					\$ -				\$ -				\$ -				\$ -
3 Long Span Structure	Mile	\$	61,919,232					\$ -				\$ -				\$ -				\$ -
4 Waterway Crossing - Primary	Mile	\$	85,342,208				0	\$ -			0	\$ -				\$ -				\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408					\$ -				\$ -				\$ -				\$ -
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264					\$ -				\$ -				\$ -				\$ -
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312					\$ -				\$ -				\$ -				\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896					\$ -				\$ -				\$ -				\$ -
9 Double Track Drill & Blast	Mile	\$	146,887,680				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000					\$ -				\$ -				\$ -				\$ -
Double Track TBM (<6 Miles)	Mile	\$	106,637,312					\$ -				\$ -				\$ -				\$ -
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896					\$ -				\$ -				\$ -				\$ -
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952					\$ -				\$ -				\$ -				\$ -
12 Crossovers	ea	\$	442,368					\$ -				\$ -				\$ -				\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$	78,843,904				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.76	\$ 59,730,230
Trench Long (4 tracks) (1000 ft+)	Mile	\$	118,265,856				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	57,524,224					\$ -				\$ -				\$ -				\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$	86,286,336					\$ -				\$ -				\$ -				\$ -
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704					\$ -				\$ -				\$ -			0.00	\$ -
17 Retaining Walls	Mile	\$	8,613,888				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
18 Containment Walls	Mile	\$	5,907,456				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080					\$ -				\$ -				\$ -				\$ -
Four Track Drill & Blast	Mile	\$	293,775,360					\$ -				\$ -				\$ -				\$ -
Four Track Mined (Soft Soil)	Mile	\$	158,400,000					\$ -				\$ -				\$ -				\$ -
Four Track TBM (<6 Miles)	Mile	\$	213,274,624					\$ -				\$ -				\$ -				\$ -
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792					\$ -				\$ -				\$ -				\$ -
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114					\$ -				\$ -				\$ -				\$ -
Grade Separations																				
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352					\$ -				\$ -				\$ -				\$ -



COST ELEMENTS				UNIT	UNIT PRICE	At-Grade (2 tracks)			At-Grade (4 tracks)				Aerial (2 tracks)				Open Trench (2 tracks)					
Subsection 5				Base: 2009 (3rd Quarter)	A			A				A				A						
					Start: 1565 + 00	End: 1605 + 00	0.76 Miles	Start: 1565 + 00	End: 1605 + 00	0.76 Miles	Start: 1565 + 00	Start: 1605 + 00	0.76 Miles	Start: 1565 + 00	Start: 1605 + 00	0.76 Miles						
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)					Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)					Start: 0 + 00	0.00 Miles	Start: 0 + 00		End: 1605 + 00	0.76 Miles	Start: 0 + 00		0.00 Miles									
Double Track Tunnel (Mile)					Start: 0 + 00	0.00 Miles	Start: 0 + 00		0.00 Miles	Start: 0 + 00	0.00 Miles											
Double Track Trench (Mile)					Start: 0 + 00	0.00 Miles	Start: 0 + 00		0.00 Miles	Start: 0 + 00	0.00 Miles											
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)					Start: 0 + 00	0.00 Miles	Start: 0 + 00		0.00 Miles	Start: 0 + 00	End: 0 + 00		0.00 Miles									
Four Track Tunnel (Mile)					Start: 0 + 00	0.00 Miles	Start: 0 + 00		0.00 Miles	Start: 0 + 00	0.00 Miles											
Four Track Trench (Mile)					Start: 0 + 00	0.00 Miles	Start: 0 + 00		0.00 Miles	Start: 0 + 00	0.00 Miles											
2	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$	-				0	\$	-					\$	-	
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			0	\$	-				0	\$	-				0	\$	-	
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-					\$	-					\$	-	
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			0	\$	-				0	\$	-					\$	-	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-					\$	-					\$	-	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			0	\$	-					\$	-					\$	-	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-					\$	-					\$	-	
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$	-					\$	-			0	\$	-	-	
8	Minor Crossing Closures	ea	\$	87,040				\$	-					\$	-					\$	-	
Building Items																						
1	Intermediate Passenger Stations	Each	\$	-				\$	-					\$	-					\$	-	
2	Terminal Passenger Stations	Each	\$	-				\$	-					\$	-					\$	-	
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$	-					\$	-					\$	-	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-				2	\$	30,000,000					\$	-	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-					\$	-					\$	-	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-					\$	-			2	\$	30,000,000	-	
3	Maintenance Facility	Each	\$	123,921,884				\$	-					\$	-					\$	-	
4	Parking - Structures	space	\$	-				\$	-					\$	-					\$	-	
5	Parking - At Grade	space	\$	-				\$	-					\$	-					\$	-	
Rail & Utility Relocation																						
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-					\$	-					\$	-	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-					\$	-					\$	-	
3	Single Track Removal	Mile	\$	130,048				\$	-					\$	-					\$	-	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-					\$	-					\$	-	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-					\$	-					\$	-	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-					\$	-					\$	-	
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-					\$	-					\$	-	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-					\$	-					\$	-	
ROW (Not Included)																						
ROW required for each segment																						
1	Dense Urban	Acre	\$	2,786,321				\$	-					\$	-					\$	-	
2	Urban	Acre	\$	1,371,510				\$	-					\$	-					\$	-	
3	Dense Suburban	Acre	\$	908,134				\$	-					\$	-					\$	-	
4	Suburban	Acre	\$	208,418				\$	-					\$	-					\$	-	
5	Undeveloped	Acre	\$	3,642				\$	-					\$	-					\$	-	
ROW required for Temp. Construction Easement														\$	-					\$	-	
1	Dense Urban	Acre						\$	-					\$	-					\$	-	
2	Urban	Acre						\$	-					\$	-					\$	-	
3	Dense Suburban	Acre						\$	-					\$	-					\$	-	
4	Suburban	Acre						\$	-					\$	-					\$	-	
5	Undeveloped	Acre						\$	-					\$	-					\$	-	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																						
6	Dense Urban	Acre	\$	2,786,321				\$	-					\$	-					\$	-	
7	Urban	Acre	\$	1,371,510				\$	-					\$	-					\$	-	
8	Dense Suburban	Acre	\$	908,134				\$	-					\$	-					\$	-	
9	Suburban	Acre	\$	208,418				\$	-					\$	-					\$	-	
10	Undeveloped	Acre	\$	3,642				\$	-					\$	-					\$	-	
	Environmental Mitigation = 3% Line Costs							\$	54,231				\$	101,963			\$	1,814,487			\$	3,197,195
System Elements																						
1	Signaling (ATC)	Mile	\$	2,070,000			0.76	\$	1,568,182			0.76	\$	1,568,182		0.76	\$	1,568,182		0.76	\$	1,568,182
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.76	\$	409,091			0.76	\$	409,091		0.76	\$	409,091		0.76	\$	409,091
3	Wayside Protection System	Mile	\$	108,000			0.76	\$	81,818			0.76	\$	81,818		0.76	\$	81,818		0.76	\$	81,818
Electrification Items																						
1	Traction Power supply	Mile	\$	1,170,000			0.76	\$	886,364			0.76	\$	886,364		0.76	\$	886,364		0.76	\$	886,364
2	Traction Power Distribution	Mile	\$	1,485,000			0.76	\$	1,125,000			0.76	\$	1,125,000		0.76	\$	1,125,000		0.76	\$	1,125,000
Subtotal								\$	5,932,383				\$	7,571,194			\$	66,367,832			\$	113,840,811
Program Implementation Costs (per screening)								\$	1,512,758				\$	1,930,654			\$	16,923,797			\$	29,029,407
Program Implementation Costs																						
Contingencies (per screening) (25%)								\$	1,483,096				\$	1,892,798			\$	16,591,958			\$	28,460,203
Subtotal								\$	8,928,236				\$	11,394,647			\$	99,883,587			\$	171,330,421
Subtotal (Rounded)								\$	9,000,000				\$	11,000,000			\$	100,000,000			\$	171,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (HST only)			
Subsection 5				Base: 2009 (3rd Quarter)	A				A				A			
					Start: 1565 + 00	Start: 1605 + 00	0.76 Miles		Start: 1565 + 00	Start: 1605 + 00	0.76 Miles		Start: 1565 + 00	Start: 1605 + 00	0.76 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1565 + 00	End: 1605 + 00	0.76 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total																
1 Double Track Section - At Grade	Mile	\$	2,100,224				0.00	\$ -			0.00	\$ -			0.00	\$ -
2 Double Track Section - On Structure	Mile	\$	4,700,160				0.00	\$ -			0.00	\$ -			0.00	\$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				0.00	\$ -			0.00	\$ -			0.76 Miles	\$ 3,560,727
4 Double Track Section - In Trench	Mile	\$	4,700,160				0.00	\$ -			0.00	\$ -			0.00	\$ -
Four Track Section - Total																
Four-track Section - At Grade	Mile	\$	4,200,448				0.00	\$ -			0.00	\$ -			0.00	\$ -
Four-Track Section - On Structure	Mile	\$	9,400,320				0	\$ -			0	\$ -			0	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0	\$ -			0.00	\$ -			0.00 Miles	\$ -
Four-Track Section - In Trench	Mile	\$	9,400,320				0.76	\$ 7,121,455			0.76	\$ 7,121,455			0	\$ -
Single Track - Total																
5 Single Track Section - At Grade	Mile	\$	1,549,312				0	\$ -			0	\$ -			0	\$ -
6 Single Track Section - On structure	Mile	\$	2,350,080				0	\$ -			0	\$ -			0	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0	\$ -			0	\$ -			0	\$ -
8 Single Track Section - In Trench	Mile	\$	2,350,080				0	\$ -			0	\$ -			0	\$ -
9 Freight Double Track - At Grade	Mile	\$	2,839,552				0	\$ -			0	\$ -			0	\$ -
10 Freight Single Track - At Grade	Mile	\$	1,549,312				0	\$ -			0	\$ -			0	\$ -
Earthwork Items																
1 Site Preparation - Undeveloped	Acre	\$	9,216				10.10	\$ 93,091			0.00	\$ -			0.00	\$ -
2 Total Cut	CY	\$	6.00				651851.85	\$ 3,911,111			651851.85	\$ 3,911,111			0.00	\$ -
3 Total Fill	CY	\$	6.00				0.00	\$ -			325925.93	\$ 1,955,556			0.00	\$ -
4 Borrow	CY	\$	13.00				0.00	\$ -			0.00	\$ -			0.00	\$ -
5 Spoil	CY	\$	13.00				651851.85	\$ 8,474,074			325925.93	\$ 4,237,037			0.00	\$ -
6 Landscape erosion Control	Acre	\$	6,144				10.10	\$ 62,061			0.00	\$ -			0.00	\$ -
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.76	\$ 109,382			0.76	\$ 109,382			0.00	\$ -
8 Special Drainage Facilities	5% Earthwork							\$ 632,486				\$ 510,654				\$ -
Structures, Tunnels, Walls																
1 Standard Structure (2 tracks)	Mile	\$	34,972,672				0.00	\$ -			0.00	\$ -			0.00	\$ -
Standard Structure (4 tracks)	Mile	\$	52,459,008				0.00				0.00				0.00	
2 High Structure	Mile	\$	40,424,448					\$ -				\$ -				\$ -
3 Long Span Structure	Mile	\$	61,919,232					\$ -				\$ -				\$ -
4 Waterway Crossing - Primary	Mile	\$	85,342,208					\$ -				\$ -				\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408					\$ -				\$ -				\$ -
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264					\$ -				\$ -				\$ -
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312					\$ -				\$ -				\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896					\$ -				\$ -				\$ -
9 Double Track Drill & Blast	Mile	\$	146,887,680				0.00	\$ -			0.00	\$ -			0.00	\$ -
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000					\$ -				\$ -			0.00	\$ -
Double Track TBM (<6 Miles)	Mile	\$	106,637,312												0.76	\$ 80,785,842
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896													
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952					\$ -				\$ -				\$ -
12 Crossovers	ea	\$	442,368					\$ -				\$ -				\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				0.00	\$ -			0.00	\$ -			0.00	\$ -
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$	78,843,904				0.00	\$ -			0.00	\$ -			0.00	\$ -
Trench Long (4 tracks) (1000 ft+)	Mile	\$	118,265,856				0.76	\$ 89,595,345			0.00				0.00	
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	57,524,224					\$ -				\$ -				\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$	86,286,336													
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				0.00	\$ -			0.76	\$ 8,976,291			0.76	\$ 8,976,291
17 Retaining Walls	Mile	\$	8,613,888				0.00	\$ -			0.00	\$ -			0.00	\$ -
18 Containment Walls	Mile	\$	5,907,456				0.00	\$ -			0.00	\$ -			0.00	\$ -
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080					\$ -				\$ -				\$ -
Four Track Drill & Blast	Mile	\$	293,775,360					\$ -				\$ -				\$ -
Four Track Mined (Soft Soil)	Mile	\$	158,400,000					\$ -				\$ -				\$ -
Four Track TBM (<6 Miles)	Mile	\$	213,274,624												0.00	\$ -
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792												0.00	\$ -
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00	\$ -			0.76	\$ 198,857,697			0.00	\$ -
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114													
Grade Separations																
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352					\$ -				\$ -				\$ -



COST ELEMENTS		UNIT	UNIT PRICE	Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (HST only)			
Subsection 5			Base: 2009 (3rd Quarter)	A				A				A			
				Start: 1565 + 00	Start: 1605 + 00	0.76 Miles		Start: 1565 + 00	Start: 1605 + 00	0.76 Miles		Start: 1565 + 00	Start: 1605 + 00	0.76 Miles	
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1565 + 00	End: 1605 + 00	0.76 Miles	
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)				Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 1565 + 00	End: 1605 + 00	0.76 Miles		Start: 0 + 00		0.00 Miles	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$ -				\$ -				\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680			0	\$ -				\$ -			0	\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -				\$ -				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -				\$ -				\$ -
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -				\$ -				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -				\$ -				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -				\$ -				\$ -
7	Street Bridging HSR Trench	ea	\$ 1,398,784			0	\$ -			0	\$ -			0	\$ -
8	Minor Crossing Closures	ea	\$ 87,040				\$ -			0	\$ -			0	\$ -
Building Items															
1	Intermediate Passenger Stations	Each	\$ -				\$ -				\$ -				\$ -
2	Terminal Passenger Stations	Each	\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -				\$ -				\$ -
	Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -				\$ -				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -			0	\$ -
	Caltrain Passenger Station - In Trench	Each	\$15,000,000			2	\$ 30,000,000			2	\$ 30,000,000				\$ -
3	Maintenance Facility	Each	\$ 123,921,884				\$ -				\$ -				\$ -
4	Parking - Structures	space	\$ -				\$ -				\$ -				\$ -
5	Parking - At Grade	space	\$ -				\$ -				\$ -				\$ -
Rail & Utility Relocation															
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -
3	Single Track Removal	Mile	\$ 130,048				\$ -				\$ -				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -				\$ -
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -				\$ -
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -
ROW (Not Included)															
ROW required for each segment															
1	Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -
2	Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -
3	Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -
4	Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -
5	Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -
ROW required for Temp. Construction Easement							\$ -				\$ -				\$ -
1	Dense Urban	Acre					\$ -				\$ -				\$ -
2	Urban	Acre					\$ -				\$ -				\$ -
3	Dense Suburban	Acre					\$ -				\$ -				\$ -
4	Suburban	Acre					\$ -				\$ -				\$ -
5	Undeveloped	Acre					\$ -				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities															
6	Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -
7	Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -
8	Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -
9	Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -
10	Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -
	Environmental Mitigation = 3% Line Costs						\$ 4,199,970				\$ 7,670,375				\$ 2,799,686
System Elements															
1	Signaling (ATC)	Mile	\$ 2,070,000			0.76	\$ 1,568,182			0.76	\$ 1,568,182			0.76	\$ 1,568,182
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.76	\$ 409,091			0.76	\$ 409,091			0.76	\$ 409,091
3	Wayside Protection System	Mile	\$ 108,000			0.76	\$ 81,818			0.76	\$ 81,818			0.76	\$ 81,818
Electrification Items															
1	Traction Power supply	Mile	\$ 1,170,000			0.76	\$ 886,364			0.76	\$ 886,364			0.76	\$ 886,364
2	Traction Power Distribution	Mile	\$ 1,485,000			0.76	\$ 1,125,000			0.76	\$ 1,125,000			0.76	\$ 1,125,000
Subtotal							\$ 148,269,429				\$ 267,420,012				\$ 100,193,001
Program Implementation Costs (per screening)							\$ 37,808,704				\$ 68,192,103				\$ 25,549,215
Program Implementation Costs															
Contingencies (per screening) (25%)							\$ 37,067,357				\$ 66,855,003				\$ 25,048,250
Subtotal							\$ 223,145,491				\$ 402,467,118				\$ 150,790,466
Subtotal (Rounded)							\$ 223,000,000				\$ 402,000,000				\$ 151,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Aerial (2 tracks)				Aerial (4 tracks)				At-Grade (2 tracks)				At-Grade (4 tracks)			
Subsection 5			Base: 2009 (3rd Quarter)	B				B				B				B				
				Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)				Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)				Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		
Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Trench (Mile)				Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Section - Total																				
1	Double Track Section - At Grade	Mile	\$	2,100,224		0.00	\$	-		0.00	\$	-		1.70	\$	3,579,927		0.00	\$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160		1.70	\$	8,011,636		0.00	\$	-		0.00	\$	-		0.00	\$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
4	Double Track Section - In Trench	Mile	\$	4,700,160		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
Four Track Section - Total																				
	Four-track Section - At Grade	Mile	\$	4,200,448		0.00	\$	-		0.00	\$	-		0.00	\$	-		1.70	\$	7,159,855
	Four-Track Section - On Structure	Mile	\$	9,400,320		0.00	\$	-		1.70	\$	16,023,273		0.00	\$	-		0.00	\$	-
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Four-Track Section - In Trench	Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
Single Track - Total																				
5	Single Track Section - At Grade	Mile	\$	1,549,312		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
Earthwork Items																				
1	Site Preparation - Undeveloped	Acre	\$	9,216		26.52	\$	244,408		26.52	\$	244,408		26.52	\$	244,408		26.52	\$	244,408
2	Total Cut	CY	\$	6.00		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
3	Total Fill	CY	\$	6.00		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
4	Borrow	CY	\$	13.00		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
5	Spoil	CY	\$	13.00		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
6	Landscape erosion Control	Acre	\$	6,144		26.52	\$	162,939		26.52	\$	162,939		26.52	\$	162,939		26.52	\$	162,939
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384		0.00	\$	-		0.00	\$	-		1.70	\$	246,109		1.70	\$	246,109
8	Special Drainage Facilities	5% Earthwork					\$	20,367			\$	20,367			\$	32,673			\$	32,673
Structures, Tunnels, Walls																				
1	Standard Structure (2 tracks)	Mile	\$	34,972,672		1.70	\$	59,612,509		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008		0.00				1.70	\$	89,418,764		0.00				0.00		
2	High Structure	Mile	\$	40,424,448			\$	-			\$	-			\$	-			\$	-
3	Long Span Structure	Mile	\$	61,919,232			\$	-			\$	-			\$	-			\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208																
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			\$	-			\$	-			\$	-			\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$	-			\$	-			\$	-			\$	-
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-			\$	-			\$	-			\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			\$	-			\$	-			\$	-			\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000			\$	-			\$	-			\$	-			\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312																
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$	-			\$	-			\$	-			\$	-
12	Crossovers	ea	\$	442,368			\$	-			\$	-			\$	-			\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336		0.00				0.00				0.00				0.00		
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904			\$	-			\$	-			\$	-			\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			\$	-			\$	-			\$	-			\$	-
17	Retaining Walls	Mile	\$	8,613,888		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
18	Containment Walls	Mile	\$	5,907,456		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080			\$	-			\$	-			\$	-			\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360			\$	-			\$	-			\$	-			\$	-
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000			\$	-			\$	-			\$	-			\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624																
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792																
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																
Grade Separations																				
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352			\$	-			\$	-			\$	-			\$	-
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528		0	\$	-		0	\$	-		0	\$	-		0	\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680		0	\$	-		0	\$	-		6	\$	16,558,080		6	\$	16,558,080
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	-			\$	-			\$	-			\$	-
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			\$	-			\$	-			\$	-			\$	-



COST ELEMENTS			UNIT	UNIT PRICE	Aerial (2 tracks)				Aerial (4 tracks)				At-Grade (2 tracks)				At-Grade (4 tracks)			
Subsection 5				Base: 2009 (3rd Quarter)	B				B				B				B			
					Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles	
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00	0.00 Miles	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -				\$ -				\$ -				\$ -	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -				\$ -				\$ -				\$ -	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -				\$ -				\$ -				\$ -	
7	Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -				\$ -				\$ -				\$ -	
8	Minor Crossing Closures	ea	\$ 87,040				\$ -				\$ -				\$ -				\$ -	
Building Items																				
1	Intermediate Passenger Stations	Each	\$ -				\$ -				\$ -				\$ -				\$ -	
2	Terminal Passenger Stations	Each	\$ -				\$ -				\$ -				\$ -				\$ -	
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -				\$ -				\$ -	2		\$ 30,000,000	\$ -	
	Caltrain Passenger Station - On Structure	Each	\$15,000,000			2	\$ 30,000,000			2	\$ 30,000,000				\$ -				\$ -	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -				\$ -				\$ -	
	Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -				\$ -				\$ -				\$ -	
3	Maintenance Facility	Each	\$ 123,921,884				\$ -				\$ -				\$ -				\$ -	
4	Parking - Structures	space	\$ -				\$ -				\$ -				\$ -				\$ -	
5	Parking - At Grade	space	\$ -				\$ -				\$ -				\$ -				\$ -	
Rail & Utility Relocation																				
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -				\$ -	
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -				\$ -	
3	Single Track Removal	Mile	\$ 130,048				\$ -				\$ -				\$ -				\$ -	
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -				\$ -				\$ -	
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -				\$ -				\$ -	
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -				\$ -				\$ -	
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -				\$ -				\$ -	
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -				\$ -	
ROW (Not Included)																				
ROW required for each segment																				
1	Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -				\$ -	
2	Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -				\$ -	
3	Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -				\$ -	
4	Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -				\$ -	
5	Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -				\$ -	
ROW required for Temp. Construction Easement								\$ -			\$ -				\$ -				\$ -	
1	Dense Urban	Acre					B				B									
2	Urban	Acre					\$ -				\$ -				\$ -				\$ -	
3	Dense Suburban	Acre					\$ -				\$ -				\$ -				\$ -	
4	Suburban	Acre					\$ -				\$ -				\$ -				\$ -	
5	Undeveloped	Acre					\$ -				\$ -				\$ -				\$ -	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																				
6	Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -				\$ -	
7	Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -				\$ -	
8	Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -				\$ -	
9	Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -				\$ -	
10	Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -				\$ -	
Environmental Mitigation = 3% Line Costs								\$ 2,941,556				\$ 4,076,093				\$ 624,724				\$ 1,632,122
System Elements																				
1	Signaling (ATC)	Mile	\$ 2,070,000			1.70	\$ 3,528,409			1.70	\$ 3,528,409			1.70	\$ 3,528,409			1.70	\$ 3,528,409	
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.70	\$ 920,455			1.70	\$ 920,455			1.70	\$ 920,455			1.70	\$ 920,455	
3	Wayside Protection System	Mile	\$ 108,000			1.70	\$ 184,091			1.70	\$ 184,091			1.70	\$ 184,091			1.70	\$ 184,091	
Electrification Items																				
1	Traction Power supply	Mile	\$ 1,170,000			1.70	\$ 1,994,318			1.70	\$ 1,994,318			1.70	\$ 1,994,318			1.70	\$ 1,994,318	
2	Traction Power Distribution	Mile	\$ 1,485,000			1.70	\$ 2,531,250			1.70	\$ 2,531,250			1.70	\$ 2,531,250			1.70	\$ 2,531,250	
Subtotal								\$ 110,151,939				\$ 149,104,366				\$ 30,607,383				\$ 65,194,708
Program Implementation Costs (per screening)								\$ 28,088,744				\$ 38,021,613				\$ 7,804,883				\$ 16,624,651
Program Implementation Costs																				
Contingencies (per screening) (25%)								\$ 27,537,985				\$ 37,276,092				\$ 7,651,846				\$ 16,298,677
Subtotal								\$ 165,778,668				\$ 224,402,071				\$ 46,064,112				\$ 98,118,036
Subtotal (Rounded)								\$ 166,000,000				\$ 224,000,000				\$ 46,000,000				\$ 98,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (2 tracks)				Covered Trench (4 tracks)			
Subsection 5				Base: 2009 (3rd Quarter)	B				B				B				B			
					Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles	
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Section - Total																				
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			1.70	8,011,636			0.00	\$ -
4	Double Track Section - In Trench	Mile	\$	4,700,160			1.70	\$ 8,011,636			0.00	\$ -			0.00	\$ -			0.00	\$ -
Four Track Section - Total																				
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
	Four-Track Section - On Structure	Mile	\$	9,400,320			0	\$ -			0	\$ -			0	\$ -			0	\$ -
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0	\$ -			0	\$ -			0.00	\$ -			1.70	16,023,273
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$ -			1.70	\$ 16,023,273			0	\$ -			0	\$ -
Single Track - Total																				
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -			0	\$ -
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -			0	\$ -
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -			0	\$ -
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -			0	\$ -
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$ -			0	\$ -			0	\$ -			0	\$ -
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -			0	\$ -
Earthwork Items																				
1	Site Preparation - Undeveloped	Acre	\$	9,216			22.73	\$ 209,455			22.73	\$ 209,455			22.73	\$ 209,455			22.73	\$ 209,455
2	Total Cut	CY	\$	6.00			1466666.67	\$ 8,800,000			1466666.67	\$ 8,800,000			1466666.67	\$ 8,800,000			1466666.67	\$ 8,800,000
3	Total Fill	CY	\$	6.00			0.00	\$ -			0.00	\$ -			733333.33	\$ 4,400,000			733333.33	\$ 4,400,000
4	Borrow	CY	\$	13.00			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
5	Spoil	CY	\$	13.00			1466666.67	\$ 19,066,667			1466666.67	\$ 19,066,667			733333.33	\$ 9,533,333			733333.33	\$ 9,533,333
6	Landscape erosion Control	Acre	\$	6,144			22.73	\$ 139,636			22.73	\$ 139,636			22.73	\$ 139,636			22.73	\$ 139,636
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			1.70	\$ 246,109			1.70	\$ 246,109			0.00	\$ -			0.00	\$ -
8	Special Drainage Facilities	5% Earthwork						\$ 1,423,093				\$ 1,423,093				\$ 1,154,121				\$ 1,154,121
Structures, Tunnels, Walls																				
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
	Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
2	High Structure	Mile	\$	40,424,448				\$ -				\$ -				\$ -				\$ -
3	Long Span Structure	Mile	\$	61,919,232				\$ -				\$ -				\$ -				\$ -
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$ -				\$ -				\$ -				\$ -
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.01	\$ 871,680			0.01	\$ 871,680				\$ -				\$ -
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$ -				\$ -				\$ -				\$ -
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$ -				\$ -				\$ -				\$ -
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$ -				\$ -				\$ -				\$ -
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$ -				\$ -				\$ -				\$ -
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312				\$ -				\$ -				\$ -				\$ -
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896				\$ -				\$ -				\$ -				\$ -
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$ -				\$ -				\$ -				\$ -
12	Crossovers	ea	\$	442,368				\$ -				\$ -				\$ -				\$ -
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$ -			0.00	\$ -			1.70	223,714,909			0.00	\$ -
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			1.70	\$ 98,052,655			0.00	\$ -			0.00	\$ -			0.00	\$ -
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336			0.00	\$ -			1.70	\$ 147,078,982			0.00	\$ -			0.00	\$ -
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$ -				\$ -				\$ -				\$ -
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856				\$ -				\$ -				\$ -				\$ -
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0.00	\$ -			0.00	\$ -			1.70	20,196,655			1.70	\$ 20,196,655
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
18	Containment Walls	Mile	\$	5,907,456			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$ -				\$ -				\$ -				\$ -
	Four Track Drill & Blast	Mile	\$	293,775,360				\$ -				\$ -				\$ -			0.00	\$ -
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$ -				\$ -				\$ -				\$ -
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624				\$ -				\$ -				\$ -				\$ -
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792				\$ -				\$ -				\$ -				\$ -
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$ -			0.00	\$ -			0.00	\$ -			1.70	\$ 447,429,818
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114				\$ -				\$ -				\$ -				\$ -
Grade Separations																				
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$ -				\$ -				\$ -				\$ -
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$ -				\$ -				\$ -				\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			0	\$ -			0	\$ -				\$ -				\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$ -				\$ -				\$ -				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$ -				\$ -				\$ -				\$ -



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (2 tracks)				Covered Trench (4 tracks)			
Subsection 5				Base: 2009 (3rd Quarter)	B				B				B				B			
					Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles	
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$ -				\$ -				\$ -				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$ -				\$ -				\$ -				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$ -				\$ -				\$ -				\$ -
7	Street Bridging HSR Trench	ea	\$	1,398,784			0	\$ -			0	\$ -			0	\$ -			0	\$ -
8	Minor Crossing Closures	ea	\$	87,040			6	\$ 522,240			6	\$ 522,240			0	\$ -			0	\$ -
Building Items																				
1	Intermediate Passenger Stations	Each	\$	-				\$ -				\$ -				\$ -				\$ -
Terminal Passenger Stations																				
2	Terminal Passenger Stations	Each	\$	-				\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000			2	\$ 30,000,000			2	\$ 30,000,000			2	\$ 30,000,000			2	\$ 30,000,000
3	Maintenance Facility	Each	\$	123,921,884				\$ -				\$ -				\$ -				\$ -
4	Parking - Structures	space	\$	-				\$ -				\$ -				\$ -				\$ -
5	Parking - At Grade	space	\$	-				\$ -				\$ -				\$ -				\$ -
Rail & Utility Relocation																				
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -				\$ -				\$ -				\$ -
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$ -				\$ -				\$ -				\$ -
Single Track Removal																				
3	Single Track Removal	Mile	\$	130,048				\$ -				\$ -				\$ -				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$ -				\$ -				\$ -				\$ -
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$ -				\$ -				\$ -				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$ -				\$ -				\$ -				\$ -
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$ -				\$ -				\$ -				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$ -				\$ -				\$ -				\$ -
ROW (Not Included)																				
ROW required for each segment																				
1	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -				\$ -				\$ -
2	Urban	Acre	\$	1,371,510				\$ -				\$ -				\$ -				\$ -
3	Dense Suburban	Acre	\$	908,134				\$ -				\$ -				\$ -				\$ -
4	Suburban	Acre	\$	208,418				\$ -				\$ -				\$ -				\$ -
5	Undeveloped	Acre	\$	3,642				\$ -				\$ -				\$ -				\$ -
ROW required for Temp. Construction Easement								\$ -				\$ -				\$ -				\$ -
1	Dense Urban	Acre						\$ -				\$ -				\$ -				\$ -
2	Urban	Acre						\$ -				\$ -				\$ -				\$ -
3	Dense Suburban	Acre						\$ -				\$ -				\$ -				\$ -
4	Suburban	Acre						\$ -				\$ -				\$ -				\$ -
5	Undeveloped	Acre						\$ -				\$ -				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities																				
6	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -				\$ -				\$ -
7	Urban	Acre	\$	1,371,510				\$ -				\$ -				\$ -				\$ -
8	Dense Suburban	Acre	\$	908,134				\$ -				\$ -				\$ -				\$ -
9	Suburban	Acre	\$	208,418				\$ -				\$ -				\$ -				\$ -
10	Undeveloped	Acre	\$	3,642				\$ -				\$ -				\$ -				\$ -
Environmental Mitigation = 3% Line Costs								\$ 5,020,295				\$ 6,731,434				\$ 9,184,792				\$ 16,136,589
System Elements																				
1	Signaling (ATC)	Mile	\$	2,070,000			1.70	\$ 3,528,409			1.70	\$ 3,528,409			1.70	\$ 3,528,409			1.70	\$ 3,528,409
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.70	\$ 920,455			1.70	\$ 920,455			1.70	\$ 920,455			1.70	\$ 920,455
3	Wayside Protection System	Mile	\$	108,000			1.70	\$ 184,091			1.70	\$ 184,091			1.70	\$ 184,091			1.70	\$ 184,091
Electrification Items																				
1	Traction Power supply	Mile	\$	1,170,000			1.70	\$ 1,994,318			1.70	\$ 1,994,318			1.70	\$ 1,994,318			1.70	\$ 1,994,318
2	Traction Power Distribution	Mile	\$	1,485,000			1.70	\$ 2,531,250			1.70	\$ 2,531,250			1.70	\$ 2,531,250			1.70	\$ 2,531,250
Subtotal								\$ 181,521,989				\$ 240,271,091				\$ 324,503,061				\$ 563,181,402
Program Implementation Costs (per screening)								\$ 46,288,107				\$ 61,269,128				\$ 82,748,280				\$ 143,611,258
Program Implementation Costs																				
Contingencies (per screening) (25%)								\$ 45,380,497				\$ 60,067,773				\$ 81,125,765				\$ 140,795,351
Subtotal								\$ 273,190,593				\$ 361,607,992				\$ 488,377,106				\$ 847,588,011
Subtotal (Rounded)								\$ 273,000,000				\$ 362,000,000				\$ 488,000,000				\$ 848,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (HST only)				Hybrid (2 tracks over 2 tracks)			
Subsection 5				Base: 2009 (3rd Quarter)	B				B			
					Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total												
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$ -			0.00	\$ -
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			1.70 Miles	\$ 8,011,636			1.70	\$ 8,011,636
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$ -			1.70	\$ 8,011,636
											0	\$ -
											0	\$ -
											0	\$ -
											0	\$ -
Four Track Section - Total												
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$ -			0.00	\$ -
	Four-Track Section - On Structure	Mile	\$	9,400,320			0	\$ -			0.00	\$ -
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00 Miles	\$ -			0.00	\$ -
	Four-Track Section - In Trench	Mile	\$	9,400,320			0	\$ -			0.00	\$ -
Single Track - Total												
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$ -			0	\$ -
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$ -			0	\$ -
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$ -			0	\$ -
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$ -			0	\$ -
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -
Earthwork Items												
1	Site Preparation - Undeveloped	Acre	\$	9,216			0.00	\$ -			36.16	\$ 333,223
2	Total Cut	CY	\$	6.00			0.00	\$ -			2333333.33	\$ 14,000,000
3	Total Fill	CY	\$	6.00			0.00	\$ -			0.00	\$ -
4	Borrow	CY	\$	13.00			0.00	\$ -			0.00	\$ -
5	Spoil	CY	\$	13.00			0.00	\$ -			2333333.33	\$ 30,333,333
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$ -			0.00	\$ -
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$ -			1.70	\$ 246,109
8	Special Drainage Facilities	5% Earthwork						\$ -				\$ 2,245,633
Structures, Tunnels, Walls												
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$ -			0	\$ -
	Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00					
2	High Structure	Mile	\$	40,424,448				\$ -				\$ -
3	Long Span Structure	Mile	\$	61,919,232				\$ -				\$ -
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$ -				\$ -
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$ -				\$ -
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$ -				\$ -
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$ -				\$ -
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$ -				\$ -
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$ -				\$ -
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000			0.00	\$ -				\$ -
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312			0.00	\$ -				
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896			1.70	\$ 301,228,800				
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$ -				\$ -
12	Crossovers	ea	\$	442,368				\$ -				\$ -
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$ -			0.00	\$ -
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0.00	\$ -			0	\$ -
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336			0.00					
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$ -				\$ -
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856								
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			1.70	\$ 20,196,655			1.70	\$ 20,196,655
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$ -			0	\$ -
18	Containment Walls	Mile	\$	5,907,456			0.00	\$ -			0	\$ -
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$ -				\$ -
	Four Track Drill & Blast	Mile	\$	293,775,360				\$ -				\$ -
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000			0.00	\$ -				\$ -
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624			0.00	\$ -				
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792				\$ -				
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$ -			0.00	\$ -
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114							1.70	\$ 559,979,172
Grade Separations												
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$ -				\$ -
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$ -				\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			0	\$ -				\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$ -				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$ -				\$ -



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (HST only)				Hybrid (2 tracks over 2 tracks)				
Subsection 5				Base: 2009 (3rd Quarter)	B				B				
					Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		
Subsection Details							Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 1605 + 00	End: 1695 + 00	1.70 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 1605 + 00	Start: 1695 + 00	1.70 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$ -				\$ -	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$ -				\$ -	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$ -				\$ -	
7	Street Bridging HSR Trench	ea	\$	1,398,784			0	\$ -				\$ -	
8	Minor Crossing Closures	ea	\$	87,040			0	\$ -				\$ -	
Building Items													
1	Intermediate Passenger Stations	Each	\$	-				\$ -				\$ -	
2	Terminal Passenger Stations	Each	\$	-				\$ -				\$ -	
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$ -				\$ -	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000			0	\$ -				\$ -	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000			0	\$ -				\$ -	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$ -			2	30,000,000	
3	Maintenance Facility	Each	\$	123,921,884				\$ -				\$ -	
4	Parking - Structures	space	\$	-				\$ -				\$ -	
5	Parking - At Grade	space	\$	-				\$ -				\$ -	
Rail & Utility Relocation													
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -				\$ -	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$ -				\$ -	
3	Single Track Removal	Mile	\$	130,048				\$ -				\$ -	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$ -				\$ -	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$ -				\$ -	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$ -				\$ -	
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$ -				\$ -	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$ -				\$ -	
ROW (Not Included)													
ROW required for each segment													
1	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -	
2	Urban	Acre	\$	1,371,510				\$ -				\$ -	
3	Dense Suburban	Acre	\$	908,134				\$ -				\$ -	
4	Suburban	Acre	\$	208,418				\$ -				\$ -	
5	Undeveloped	Acre	\$	3,642				\$ -				\$ -	
ROW required for Temp. Construction Easement													
1	Dense Urban	Acre						\$ -				\$ -	
2	Urban	Acre						\$ -				\$ -	
3	Dense Suburban	Acre						\$ -				\$ -	
4	Suburban	Acre						\$ -				\$ -	
5	Undeveloped	Acre						\$ -				\$ -	
Right-of-Way Required for Stations, Maintenance & Parking Facilities													
6	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -	
7	Urban	Acre	\$	1,371,510				\$ -				\$ -	
8	Dense Suburban	Acre	\$	908,134				\$ -				\$ -	
9	Suburban	Acre	\$	208,418				\$ -				\$ -	
10	Undeveloped	Acre	\$	3,642				\$ -				\$ -	
	Environmental Mitigation = 3% Line Costs							\$ 9,883,113				\$ 20,200,722	
System Elements													
1	Signaling (ATC)	Mile	\$	2,070,000			1.70	\$ 3,528,409			1.70	\$ 3,528,409	
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.70	\$ 920,455			1.70	\$ 920,455	
3	Wayside Protection System	Mile	\$	108,000			1.70	\$ 184,091			1.70	\$ 184,091	
Electrification Items													
1	Traction Power supply	Mile	\$	1,170,000			1.70	\$ 1,994,318			1.70	\$ 1,994,318	
2	Traction Power Distribution	Mile	\$	1,485,000			1.70	\$ 2,531,250			1.70	\$ 2,531,250	
Subtotal								\$ 348,478,726					
Program Implementation Costs (per screening)								\$ 88,862,075					
Program Implementation Costs													
Contingencies (per screening) (25%)								\$ 87,119,682					
Subtotal								\$ 524,460,483					
Subtotal (Rounded)								\$ 524,000,000					



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 tracks)				At-Grade (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)			
Subsection 5			Base: 2009 (3rd Quarter)	C				C				C				C				
				Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 1695 + 00	Start: 1765 + 00	1.33 Miles		Start: 1695 + 00	Start: 1765 + 00	1.33 Miles		
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)			Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles			
Double Track Section - Total																				
1	Double Track Section - At Grade	Mile	\$	2,100,224		1.33	\$	2,784,388		0.00	\$	-		0.00	\$	-		0.00	\$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
4	Double Track Section - In Trench	Mile	\$	4,700,160		0.00	\$	-		0.00	\$	-		1.33	\$	6,231,273		0.00	\$	-
Four Track Section - Total																				
	Four-track Section - At Grade	Mile	\$	4,200,448		0.00	\$	-		1.33	\$	5,568,776		0.00	\$	-		0.00	\$	-
	Four-Track Section - On Structure	Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-		0	\$	-		0	\$	-
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-		0	\$	-		0	\$	-
	Four-Track Section - In Trench	Mile	\$	9,400,320		0.00	\$	-		0.00	\$	-		0.00	\$	-		1.33	\$	12,462,545
Single Track - Total																				
5	Single Track Section - At Grade	Mile	\$	1,549,312		0.00	\$	-		0.00	\$	-		0	\$	-		0	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080		0.00	\$	-		0.00	\$	-		0	\$	-		0	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080		0.00	\$	-		0.00	\$	-		0	\$	-		0	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080		0.00	\$	-		0.00	\$	-		0	\$	-		0	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552		0.00	\$	-		0.00	\$	-		0	\$	-		0	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312		0.00	\$	-		0.00	\$	-		0	\$	-		0	\$	-
Earthwork Items																				
1	Site Preparation - Undeveloped	Acre	\$	9,216		13.89	\$	128,010		13.89	\$	128,010		17.68	\$	162,909		17.68	\$	162,909
2	Total Cut	CY	\$	6.00		0.00	\$	-		0.00	\$	-		570370.37	\$	3,422,222		570370.37	\$	3,422,222
3	Total Fill	CY	\$	6.00		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
4	Borrow	CY	\$	13.00		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
5	Spoil	CY	\$	13.00		0.00	\$	-		0.00	\$	-		570370.37	\$	7,414,815		570370.37	\$	7,414,815
6	Landscape erosion Control	Acre	\$	6,144		13.89	\$	85,340		13.89	\$	85,340		17.68	\$	108,606		17.68	\$	108,606
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384		1.33	\$	191,418		1.33	\$	191,418		1.33	\$	191,418		1.33	\$	191,418
8	Special Drainage Facilities	5% Earthwork					\$	20,238			\$	20,238			\$	564,999			\$	564,999
Structures, Tunnels, Walls																				
1	Standard Structure (2 tracks)	Mile	\$	34,972,672		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008		0.00				0.00				0.00				0.00		
2	High Structure	Mile	\$	40,424,448			\$	-			\$	-			\$	-			\$	-
3	Long Span Structure	Mile	\$	61,919,232			\$	-			\$	-			\$	-			\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208																
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			\$	-			\$	-			\$	-			\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$	-			\$	-			\$	-			\$	-
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-			\$	-			\$	-			\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			\$	-			\$	-			\$	-			\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000			\$	-			\$	-			\$	-			\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312																
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$	-			\$	-			\$	-			\$	-
12	Crossovers	ea	\$	442,368			\$	-			\$	-			\$	-			\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224		0.00	\$	-		0.00	\$	-		1.33	\$	76,263,176		0.00	\$	-
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336		0.00				0.00				0.00				1.33	\$	114,394,764
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904			\$	-			\$	-			\$	-			\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			\$	-			\$	-		0.00	\$	-		0.00	\$	-
17	Retaining Walls	Mile	\$	8,613,888		0.00	\$	-		0.00	\$	-		1.33	\$	11,419,927		1.33	\$	11,419,927
18	Containment Walls	Mile	\$	5,907,456		0.00	\$	-		0.00	\$	-		1.33	\$	7,831,855		1.33	\$	7,831,855
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080			\$	-			\$	-			\$	-			\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360			\$	-			\$	-			\$	-			\$	-
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000			\$	-			\$	-			\$	-			\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624																
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792																
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160		0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																
Grade Separations																				
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352			\$	-			\$	-			\$	-			\$	-
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528		0	\$	-		0	\$	-			\$	-			\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680		0	\$	-		0	\$	-			\$	-		0	\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	-			\$	-			\$	-			\$	-
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			\$	-			\$	-			\$	-			\$	-



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 tracks)				At-Grade (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)					
Subsection 5			Base: 2009 (3rd Quarter)	C				C				C				C						
				Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 1695 + 00	Start: 1765 + 00	1.33 Miles		Start: 1695 + 00	Start: 1765 + 00	1.33 Miles				
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)			Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles					
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Double Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles					
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles					
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Four Track Tunnel (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles					
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216					\$	-			\$	-			\$	-				
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816					\$	-			\$	-			\$	-				
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328					\$	-			\$	-			\$	-				
7	Street Bridging HSR Trench	ea	\$	1,398,784					\$	-			0	\$	-		0	\$	-			
8	Minor Crossing Closures	ea	\$	87,040					\$	-			\$	-			\$	-				
Building Items																						
1	Intermediate Passenger Stations	Each	\$	-					\$	-			\$	-			\$	-				
Terminal Passenger Stations																						
2	Terminal Passenger Stations	Each	\$	-					\$	-			\$	-			\$	-				
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000					\$	-			\$	-			\$	-				
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000					\$	-			\$	-			\$	-				
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000					\$	-			\$	-			\$	-				
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000					\$	-			2	\$	30,000,000		2	\$	30,000,000			
3	Maintenance Facility	Each	\$	123,921,884					\$	-			\$	-			\$	-				
4	Parking - Structures	space	\$	-					\$	-			\$	-			\$	-				
5	Parking - At Grade	space	\$	-					\$	-			\$	-			\$	-				
Rail & Utility Relocation																						
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896					\$	-			\$	-			\$	-				
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896					\$	-			\$	-			\$	-				
Single Track Removal																						
3	Single Track Removal	Mile	\$	130,048					\$	-			\$	-			\$	-				
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288					\$	-			\$	-			\$	-				
5	Major Utility Relocations - Urban	Mile	\$	1,084,416					\$	-			\$	-			\$	-				
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168					\$	-			\$	-			\$	-				
7	Major Utility Relocations - Suburban	Mile	\$	464,896					\$	-			\$	-			\$	-				
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720					\$	-			\$	-			\$	-				
ROW (Not Included)																						
ROW required for each segment																						
1	Dense Urban	Acre	\$	2,786,321					\$	-			\$	-			\$	-				
2	Urban	Acre	\$	1,371,510					\$	-			\$	-			\$	-				
3	Dense Suburban	Acre	\$	908,134					\$	-			\$	-			\$	-				
4	Suburban	Acre	\$	208,418					\$	-			\$	-			\$	-				
5	Undeveloped	Acre	\$	3,642					\$	-			\$	-			\$	-				
ROW required for Temp. Construction Easement									\$	-			\$	-			\$	-				
1	Dense Urban	Acre							B				\$	-			\$	-				
2	Urban	Acre							\$	-			\$	-			\$	-				
3	Dense Suburban	Acre							\$	-			\$	-			\$	-				
4	Suburban	Acre							\$	-			\$	-			\$	-				
5	Undeveloped	Acre							\$	-			\$	-			\$	-				
Right-of-Way Required for Stations, Maintenance & Parking Facilities																						
6	Dense Urban	Acre	\$	2,786,321					\$	-			\$	-			\$	-				
7	Urban	Acre	\$	1,371,510					\$	-			\$	-			\$	-				
8	Dense Suburban	Acre	\$	908,134					\$	-			\$	-			\$	-				
9	Suburban	Acre	\$	208,418					\$	-			\$	-			\$	-				
10	Undeveloped	Acre	\$	3,642					\$	-			\$	-			\$	-				
Environmental Mitigation = 3% Line Costs									\$	96,282			\$	179,813			\$	4,308,336			\$	5,639,222
System Elements																						
1	Signaling (ATC)	Mile	\$	2,070,000			1.33	\$	2,744,318			1.33	\$	2,744,318			1.33	\$	2,744,318			
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.33	\$	715,909			1.33	\$	715,909			1.33	\$	715,909			
3	Wayside Protection System	Mile	\$	108,000			1.33	\$	143,182			1.33	\$	143,182			1.33	\$	143,182			
Electrification Items																						
1	Traction Power supply	Mile	\$	1,170,000			1.33	\$	1,551,136			1.33	\$	1,551,136			1.33	\$	1,551,136			
2	Traction Power Distribution	Mile	\$	1,485,000			1.33	\$	1,968,750			1.33	\$	1,968,750			1.33	\$	1,968,750			
Subtotal							\$	10,428,972			\$	13,296,892			\$	155,042,831			\$	200,736,577		
Program Implementation Costs (per screening)							\$	2,659,388			\$	3,390,707			\$	39,535,922			\$	51,187,827		
Program Implementation Costs																						
Contingencies (per screening) (25%)							\$	2,607,243			\$	3,324,223			\$	38,760,708			\$	50,184,144		
Subtotal							\$	15,695,603			\$	20,011,822			\$	233,339,460			\$	302,108,548		
Subtotal (Rounded)							\$	16,000,000			\$	20,000,000			\$	233,000,000			\$	302,000,000		



[illegible]



COST ELEMENTS			UNIT	UNIT PRICE	Covered Trench (2 tracks)				Covered Trench (4 tracks)				Tunnel (HST only)				Hybrid (2 tracks over 2 tracks)				
Subsection 5			Base: 2009 (3rd Quarter)	C				C				C				C					
				Start: 1695 + 00	Start: 1765 + 00	1.33 Miles		Start: 1695 + 00	Start: 1765 + 00	1.33 Miles		Start: 1695 + 00	Start: 1765 + 00	1.33 Miles		Start: 1695 + 00	Start: 1765 + 00	1.33 Miles			
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)			Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	Start: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Tunnel (Mile)			Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00		0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 1695 + 00	Start: 1765 + 00	1.33 Miles				
Double Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1695 + 00	Start: 1765 + 00	1.33 Miles				
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1695 + 00	End: 1765 + 00	1.33 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Trench (Mile)			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			\$	-			\$	-			\$	-			\$	-	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			\$	-			\$	-			\$	-			\$	-	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328			\$	-			\$	-			\$	-			\$	-	
7	Street Bridging HSR Trench	ea	\$	1,398,784			0	\$	-		0	\$	-		0	\$	-			\$	-
8	Minor Crossing Closures	ea	\$	87,040			0	\$	-		0	\$	-		0	\$	-			\$	-
Building Items																					
1	Intermediate Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-			\$	-	
2	Terminal Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-			\$	-	
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000			\$	-			\$	-			\$	-			\$	-	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000			\$	-			\$	-			\$	-			\$	-	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000			\$	-			\$	-			\$	-			\$	-	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000			\$	-			\$	-			\$	-			\$	-	
3	Maintenance Facility	Each	\$	123,921,884			\$	-			\$	-			\$	-			\$	-	
4	Parking - Structures	space	\$	-			\$	-			\$	-			\$	-			\$	-	
5	Parking - At Grade	space	\$	-			\$	-			\$	-			\$	-			\$	-	
Rail & Utility Relocation																					
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896			\$	-			\$	-			\$	-			\$	-	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896			\$	-			\$	-			\$	-			\$	-	
3	Single Track Removal	Mile	\$	130,048			\$	-			\$	-			\$	-			\$	-	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288			\$	-			\$	-			\$	-			\$	-	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416			\$	-			\$	-			\$	-			\$	-	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168			\$	-			\$	-			\$	-			\$	-	
7	Major Utility Relocations - Suburban	Mile	\$	464,896			\$	-			\$	-			\$	-			\$	-	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720			\$	-			\$	-			\$	-			\$	-	
ROW (Not Included)																					
ROW required for each segment																					
1	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-			\$	-	
2	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-			\$	-	
3	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-			\$	-	
4	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-			\$	-	
5	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-			\$	-	
ROW required for Temp. Construction Easement							\$	-			\$	-			\$	-			\$	-	
1	Dense Urban	Acre					\$	-			\$	-			\$	-			\$	-	
2	Urban	Acre					\$	-			\$	-			\$	-			\$	-	
3	Dense Suburban	Acre					\$	-			\$	-			\$	-			\$	-	
4	Suburban	Acre					\$	-			\$	-			\$	-			\$	-	
5	Undeveloped	Acre					\$	-			\$	-			\$	-			\$	-	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																					
6	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-			\$	-	
7	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-			\$	-	
8	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-			\$	-	
9	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-			\$	-	
10	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-			\$	-	
	Environmental Mitigation = 3% Line Costs						\$	12,285,851			\$	11,850,680			\$	7,686,865			\$	15,011,673	
System Elements																					
1	Signaling (ATC)	Mile	\$	2,070,000		1.33	\$	2,744,318			1.33	\$	2,744,318		1.33	\$	2,744,318		1.33	\$	2,744,318
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000		1.33	\$	715,909			1.33	\$	715,909		1.33	\$	715,909		1.33	\$	715,909
3	Wayside Protection System	Mile	\$	108,000		1.33	\$	143,182			1.33	\$	143,182		1.33	\$	143,182		1.33	\$	143,182
Electrification Items																					
1	Traction Power supply	Mile	\$	1,170,000		1.33	\$	1,551,136			1.33	\$	1,551,136		1.33	\$	1,551,136		1.33	\$	1,551,136
2	Traction Power Distribution	Mile	\$	1,485,000		1.33	\$	1,968,750			1.33	\$	1,968,750		1.33	\$	1,968,750		1.33	\$	1,968,750
Subtotal							\$	428,937,514			\$	413,996,646			\$	271,039,009			\$	522,524,055	
Program Implementation Costs (per screening)							\$	109,379,066			\$	105,569,145			\$	69,114,947			\$	133,243,634	
Program Implementation Costs																					
Contingencies (per screening) (25%)							\$	107,234,379			\$	103,499,162			\$	67,759,752			\$	130,631,014	
Subtotal							\$	645,550,959			\$	623,064,953			\$	407,913,709			\$	786,398,703	
Subtotal (Rounded)							\$	646,000,000			\$	623,000,000			\$	408,000,000			\$	786,000,000	



Subsection 6	6A (1.2 miles)					6B (0.7 miles)					
	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Hybrid	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Hybrid
Capital Cost (\$2009 in Millions) does not include ROW	\$75 (4 tracks) \$48 (2 tracks)	\$265	\$593 (4 tracks) \$337 (2 tracks)	\$373 (2 tracks)	\$718-750	\$71 (4 tracks) \$47 (2 tracks)	\$41 (4 tracks) \$39 (2 tracks)	\$127 (4 tracks) \$92 (2 tracks)	\$321	\$211 (2 tracks)	\$303-406
Acquisition Cost of Permanent ROW	Highest	Medium	Lowest	Lowest	Lowest	Medium	Highest	Medium	Lowest	Lowest	Lowest
Notes:	<b>4 tracks -</b> 1. Grade separation at Palo Alto Avenue. 2. Caltrain Palo Alto station. 3. Potential HST Palo Alto station (costs not included). <b>2 tracks -</b> 1. Grade separation at Palo Alto Avenue. 2. Potential HST Palo Alto station (costs not included). 3. <i>Must be combined with 2 track deep tunnel option.</i>	1. Grade separation at Palo Alto Avenue. 2. Caltrain Palo Alto station. 3. Potential HST Palo Alto station (costs not included).	<b>4 tracks -</b> 1. Raise University Ave, Homer (Pedestrian) Ave, and Embarcadero Road. 2. Caltrain Palo Alto station. 3. Potential HST Palo Alto station (costs not included). <b>2 tracks -</b> 1. <i>Potential HST Palo Alto station (costs not included).</i> 2. <i>Must be combined with 2 track deep tunnel option for a hybrid option.</i>	<b>2 tracks -</b> 1. Caltrain two tracks to remain at grade. 2. No potential HST Palo Alto station. 3. <i>Must be combined with 2 track at grade option.</i> 4. <i>Must be combined with 2 track covered trench option for a hybrid option.</i>	1. Raise University Ave, Homer (Pedestrian) Ave, and Embarcadero Road. 2. Caltrain Palo Alto station. 3. No potential HST Palo Alto station.	<b>4 tracks -</b> No notes <b>2 tracks -</b> 1. <i>Must be combined with 2 track deep tunnel option.</i>	<b>4 tracks -</b> No notes <b>2 tracks -</b> 1. Grade separation at Churchill Avenue. 2. <i>Must be combined with 2 track deep tunnel option.</i>	<b>4 tracks -</b> No notes <b>2 tracks -</b> 1. <i>Must be combined with 2 track deep tunnel option for a hybrid option.</i>		<b>2 tracks -</b> 1. Caltrain two tracks to remain at grade or aerial viaduct. 2. <i>Must be combined with 2 track aerial viaduct or at grade option.</i> 3. <i>Must be combined with 2 track open trench option for a hybrid option.</i>	



Subsection 6	6C (1.4 miles)						6D (0.6 miles)					
	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Hybrid	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Hybrid
Capital Cost (\$2009 in Millions) does not include ROW	\$171 (4 tracks) \$122 (2 tracks)	\$46 (4 tracks) \$18 (2 tracks)	\$263 (4 tracks) \$174 (2 tracks)	\$692	\$438 (2 tracks)	\$612-869	\$59 (4 tracks) \$40 (2 tracks)	\$72 (4 tracks) \$70 (2 tracks)	\$110 (4 tracks) \$65 (2 tracks)	\$268	\$176 (2 tracks)	\$241-342
Acquisition Cost of Permanent ROW	Medium	Highest	Medium	Lowest	Lowest	Lowest	Medium	Highest	Medium	Lowest	Lowest	Lowest
Notes:	<b>4 tracks -</b> No notes <b>2 tracks -</b> 1. Caltrain California Avenue station. 2. <i>Must be combined with 2 track deep tunnel option.</i>	<b>4 tracks -</b> No notes <b>2 tracks -</b> 1. Caltrain California Avenue station. 2. <i>Must be combined with 2 track deep tunnel option.</i>	<b>4 tracks -</b> No notes <b>2 tracks -</b> 1. Caltrain California Avenue station. 2. Raise Oregon Expressway. 3. <i>Must be combined with 2 track deep tunnel option for a hybrid option.</i>	1. Caltrain California Avenue station. 2. Raise Oregon Expressway.	<b>2 tracks -</b> 1. Caltrain two tracks to remain at grade or aerial viaduct. 2. <i>Must be combined with 2 track aerial viaduct or at grade option.</i> 3. <i>Must be combined with 2 track open trench option for a hybrid option.</i>		<b>4 tracks -</b> No notes <b>2 tracks -</b> 1. <i>Must be combined with 2 track deep tunnel option.</i>	<b>4 tracks -</b> 1. Grade separation at East Meadow Drive and Charleston Road. <b>2 tracks -</b> 1. Grade separation at East Meadow Drive and Charleston Road. 2. <i>Must be combined with 2 track deep tunnel option.</i>	<b>4 tracks -</b> No notes <b>2 tracks -</b> 1. <i>Must be combined with 2 track deep tunnel option for a hybrid option.</i>		<b>2 tracks -</b> 1. Caltrain two tracks to remain at grade or aerial viaduct. 2. <i>Must be combined with 2 track aerial viaduct or at grade option.</i> 3. <i>Must be combined with 2 track open trench option for a hybrid option.</i>	



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 tracks)				At-Grade (4 tracks)				Open Trench (4 tracks)				Covered Trench (2 tracks)			
Subsection 6			Base: 2009 (3rd Quarter)	A				A				A				A				
				Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)				Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Section - Total																				
1 Double Track Section - At Grade	Mile	\$	2,100,224			1.21	\$	2,545,726			0.00	\$	-			0	\$	-		
2 Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0	\$	-		
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0	\$	-	1.21 \$ 5,697,164	
4 Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0	\$	-	-	
Four Track Section - Total																				
Four-track Section - At Grade	Mile	\$	4,200,448			0.000000	\$	-			1.21	\$	5,091,452			0.00	\$	-	0.00 \$ -	
Four-Track Section - On Structure	Mile	\$	9,400,320			0	\$	-			0	\$	-			0.00	\$	-	0.00 \$ -	
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0	\$	-			0	\$	-			0.00	\$	-	0.00 \$ -	
Four-Track Section - In Trench	Mile	\$	9,400,320			0	\$	-			0	\$	-			1.21	\$	11,394,327	0.00 \$ -	
Single Track - Total																				
5 Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-	0 \$ -	
6 Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-	0 \$ -	
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-	0 \$ -	
8 Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-	0 \$ -	
9 Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-			0	\$	-			0	\$	-	0 \$ -	
10 Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-	0 \$ -	
Earthwork Items																				
1 Site Preparation - Undeveloped	Acre	\$	9,216			9.55	\$	88,013			16.16	\$	148,945			16.16	\$	148,945	16.16 \$ 148,945	
2 Total Cut	CY	\$	6.00			0.00	\$	-			0.00	\$	-			1042962.96	\$	6,257,778	1042962.96 \$ 6,257,778	
3 Total Fill	CY	\$	6.00			0.00	\$	-			0.00	\$	-			521481.48	\$	3,128,889	521481.48 \$ 3,128,889	
4 Borrow	CY	\$	13.00			0.00	\$	-			0.00	\$	-			0.00	\$	-	0.00 \$ -	
5 Spoil	CY	\$	13.00			0.00	\$	-			0.00	\$	-			521481.48	\$	6,779,259	521481.48 \$ 6,779,259	
6 Landscape erosion Control	Acre	\$	6,144			0.00	\$	-			0.00	\$	-			16.16	\$	99,297	0.00 \$ -	
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384			1.21	\$	175,011			1.21	\$	175,011			1.21	\$	175,011	0.00 \$ -	
8 Special Drainage Facilities	5% Earthwork						\$	13,151				\$	16,198				\$	829,459	\$ 815,744	
Structures, Tunnels, Walls																				
1 Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00 Miles	\$	-			0.00 Miles	\$	-			0.00 Miles	\$	-	0.00 Miles \$ -	
Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00 Miles					0.00 Miles					0.00 Miles			0.00 Miles	
2 High Structure	Mile	\$	40,424,448				\$	-				\$	-				\$	-	\$ -	
3 Long Span Structure	Mile	\$	61,919,232				\$	-				\$	-				\$	-	\$ -	
4 Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-				\$	-			0.02	\$	1,616,330	\$ -	
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.02	\$	1,743,360			0.02	\$	1,743,360				\$	-	\$ -	
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-				\$	-				\$	-	\$ -	
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-				\$	-	\$ -	
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-				\$	-				\$	-	\$ -	
9 Double Track Drill & Blast	Mile	\$	146,887,680			0	\$	-			0	\$	-			0	\$	-	\$ -	
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-				\$	-				\$	-	\$ -	
Double Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-				\$	-	\$ -	
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896				\$	-				\$	-				\$	-	\$ -	
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-				\$	-				\$	-	\$ -	
12 Crossovers	ea	\$	442,368				\$	-				\$	-				\$	-	\$ -	
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0	\$	-			0	\$	-			0.00	\$	-	1.21 \$ 159,086,158	
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0.00 Miles	\$	-			0.00 Miles	\$	-			0.00	\$	-	0.00 \$ -	
Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336			0.00 Miles					0.00 Miles					1.21	\$	104,589,498	0.00	
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-				\$	-				\$	-	\$ -	
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																	
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0	\$	-			0	\$	-			0.00	\$	-	1.21 \$ 14,362,065	
17 Retaining Walls	Mile	\$	8,613,888			0	\$	-			0	\$	-			1.21	\$	10,441,076	0.00 \$ -	
18 Containment Walls	Mile	\$	5,907,456				\$	-				\$	-				\$	-	0.00 \$ -	
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-				\$	-				\$	-	\$ -	
Four Track Drill & Blast	Mile	\$	293,775,360				\$	-				\$	-			0.00	\$	-	0.00 \$ -	
Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-				\$	-			0.00	\$	-	0.00 \$ -	
Four Track TBM (<6 Miles)	Mile	\$	213,274,624				\$	-				\$	-				\$	-	\$ -	
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792				\$	-				\$	-				\$	-	\$ -	
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			0.00	\$	-			0.00	\$	-	0.00 \$ -	
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																	
Grade Separations																				
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-				\$	-				\$	-	\$	



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (2 tracks)				At-Grade (4 tracks)				Open Trench (4 tracks)				Covered Trench (2 tracks)						
Subsection 6			Base: 2009 (3rd Quarter)	A				A				A				A							
				Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles					
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)				Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles					
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles					
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles					
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles					
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles					
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)				ea	\$	19,926,528				1	\$	19,926,528								\$	-		
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)				ea	\$	2,759,680					\$	-							\$	-			
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)				ea	\$	2,029,568					\$	-							\$	-			
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)				ea	\$	3,563,520					\$	-							\$	-			
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)				ea	\$	3,593,216					\$	-								\$	-		
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)				ea	\$	2,850,816					\$	-								\$	-		
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)				ea	\$	3,171,328					\$	-								\$	-		
7 Street Bridging HSR Trench				ea	\$	1,398,784					\$	-								\$	-		
8 Minor Crossing Closures				ea	\$	87,040				\$	-				3	\$	4,196,352		\$	-			
Building Items																							
1 Intermediate Passenger Stations				Each	\$	-				\$	-									\$	-		
2 Terminal Passenger Stations				Each	\$	-				\$	-									\$	-		
Caltrain Passenger Station - At-Grade				Each	\$	15,000,000	0	\$	-	1	\$	15,000,000								\$	-		
Caltrain Passenger Station - On Structure				Each	\$	15,000,000				\$	-									\$	-		
Caltrain Passenger Station - In Tunnel or Subway				Each	\$	15,000,000				\$	-									\$	-		
Caltrain Passenger Station - In Trench				Each	\$	15,000,000				\$	-				1	\$	15,000,000		1	\$	15,000,000		
3 Maintenance Facility				Each	\$	123,921,884				\$	-									\$	-		
4 Parking - Structures				space	\$	-				\$	-									\$	-		
5 Parking - At Grade				space	\$	-				\$	-									\$	-		
Rail & Utility Relocation																							
1 Single Track Relocation (Temporary)				Mile	\$	2,000,896				\$	-									\$	-		
2 Single Track Relocation (Permanent)				Mile	\$	2,000,896				\$	-									\$	-		
3 Single Track Removal				Mile	\$	130,048				\$	-									\$	-		
4 Major Utility Relocations - Dense Urban				Mile	\$	1,548,288				\$	-									\$	-		
5 Major Utility Relocations - Urban				Mile	\$	1,084,416				\$	-									\$	-		
6 Major Utility Relocations - Dense Suburban				Mile	\$	775,168				\$	-									\$	-		
7 Major Utility Relocations - Suburban				Mile	\$	464,896				\$	-									\$	-		
8 Major Utility Relocations - Undeveloped				Mile	\$	30,720				\$	-									\$	-		
ROW (Not Included)																							
ROW required for each segment																							
1 Dense Urban				Acre	\$	2,786,321					\$	-								\$	-		
2 Urban				Acre	\$	1,371,510					\$	-							\$	-			
3 Dense Suburban				Acre	\$	908,134					\$	-							\$	-			
4 Suburban				Acre	\$	208,418					\$	-								\$	-		
5 Undeveloped				Acre	\$	3,642					\$	-									\$	-	
ROW required for Temp. Construction Easement																							
1 Dense Urban				Acre							\$	-									\$	-	
2 Urban				Acre							\$	-									\$	-	
3 Dense Suburban				Acre							\$	-									\$	-	
4 Suburban				Acre							\$	-									\$	-	
5 Undeveloped				Acre							\$	-									\$	-	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																							
6 Dense Urban				Acre	\$	2,786,321				\$	-										\$	-	
7 Urban				Acre	\$	1,371,510				\$	-										\$	-	
8 Dense Suburban				Acre	\$	908,134				\$	-										\$	-	
9 Suburban				Acre	\$	208,418				\$	-										\$	-	
10 Undeveloped				Acre	\$	3,642				\$	-										\$	-	
Environmental Mitigation = 3% Line Costs								\$	734,754			\$	1,263,045					\$	4,939,687			\$	6,338,280
System Elements																							
1 Signaling (ATC)				Mile	\$	2,070,000	1.21	\$	2,509,091	1.21	\$	2,509,091			1.21	\$	2,509,091		1.21	\$	2,509,091		
2 Communications (w/ Fiber Optic Backbone)				Mile	\$	540,000	1.21	\$	654,545	1.21	\$	654,545			1.21	\$	654,545		1.21	\$	654,545		
3 Wayside Protection System				Mile	\$	108,000	1.21	\$	130,909	1.21	\$	130,909			1.21	\$	130,909		1.21	\$	130,909		
Electrification Items																							
1 Traction Power supply				Mile	\$	1,170,000	1.21	\$	1,418,182	1.21	\$	1,418,182			1.21	\$	1,418,182		1.21	\$	1,418,182		
2 Traction Power Distribution				Mile	\$	1,485,000	1.21	\$	1,800,000	1.21	\$	1,800,000			1.21	\$	1,800,000		1.21	\$	1,800,000		
Subtotal								\$	31,739,270			\$	49,877,266				\$	176,108,636			\$	224,127,009	
Program Implementation Costs (per screening)								\$	8,093,514			\$	12,718,703				\$	44,907,702			\$	57,152,387	
Program Implementation Costs																							
Contingencies (per screening) (25%)								\$	7,934,818			\$	12,469,317				\$	44,027,159			\$	56,031,752	
Subtotal								\$	47,767,602			\$	75,065,286				\$	265,043,497			\$	337,311,148	
Subtotal (Rounded)								\$	48,000,000			\$	75,000,000				\$	265,000,000			\$	337,000,000	



COST ELEMENTS			UNIT	UNIT PRICE	Covered Trench (4 tracks)				Tunnel (HST only)				Hybrid (2 tracks over 2 tracks)				
Subsection 6				Base: 2009 (3rd Quarter)	A				A				A				
					Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)					Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Section - Total																	
1 Double Track Section - At Grade	Mile	\$	2,100,224			0	\$	-			0.00	\$	-		0.00	\$	-
2 Double Track Section - On Structure	Mile	\$	4,700,160			0	\$	-			0.00	\$	-		0.00	\$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0	\$	-			1.21	\$	5,697,164		1.21	\$	5,697,164
4 Double Track Section - In Trench	Mile	\$	4,700,160			0	\$	-			0.00	\$	-		1.21	\$	5,697,164



COST ELEMENTS			UNIT	UNIT PRICE	Covered Trench (4 tracks)				Tunnel (HST only)				Hybrid (2 tracks over 2 tracks)			
Subsection 6			Base: 2009 (3rd Quarter)	A				A				A				
				Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1765 + 00	End: 1829 + 00	1.21 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 1765 + 00	End: 1829 + 00	1.21 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			\$	-			\$	-			\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			\$	-			\$	-			\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	-			\$	-			\$	-
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			\$	-			\$	-			\$	-
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			\$	-			\$	-			\$	-
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			\$	-			\$	-			\$	-
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328			\$	-			\$	-			\$	-
7	Street Bridging HSR Trench	ea	\$	1,398,784			\$	-			\$	-		3	4,196,352	
8	Minor Crossing Closures	ea	\$	87,040			\$	-			\$	-			\$	-
Building Items																
1	Intermediate Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-
2	Terminal Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000			\$	-			\$	-			\$	-
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000			\$	-			\$	-			\$	-
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000			\$	-		0	\$	-			\$	-
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000		1	\$	15,000,000		0	\$	-		1	\$	15,000,000
3	Maintenance Facility	Each	\$	123,921,884			\$	-			\$	-			\$	-
4	Parking - Structures	space	\$	-			\$	-			\$	-			\$	-
5	Parking - At Grade	space	\$	-			\$	-			\$	-			\$	-
Rail & Utility Relocation																
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896			\$	-			\$	-			\$	-
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896			\$	-			\$	-			\$	-
3	Single Track Removal	Mile	\$	130,048			\$	-			\$	-			\$	-
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288			\$	-			\$	-			\$	-
5	Major Utility Relocations - Urban	Mile	\$	1,084,416			\$	-			\$	-			\$	-
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168			\$	-			\$	-			\$	-
7	Major Utility Relocations - Suburban	Mile	\$	464,896			\$	-			\$	-			\$	-
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720			\$	-			\$	-			\$	-
ROW (Not Included)																
ROW required for each segment																
1	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-
2	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-
3	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-
4	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-
5	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-
ROW required for Temp. Construction Easement																
1	Dense Urban	Acre					\$	-			\$	-			\$	-
2	Urban	Acre					\$	-			\$	-			\$	-
3	Dense Suburban	Acre					\$	-			\$	-			\$	-
4	Suburban	Acre					\$	-			\$	-			\$	-
5	Undeveloped	Acre					\$	-			\$	-			\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities																
6	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-
7	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-
8	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-
9	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-
10	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-
	Environmental Mitigation = 3% Line Costs						\$	11,281,780			\$	7,027,991			\$	14,321,769
System Elements																
1	Signaling (ATC)	Mile	\$	2,070,000		1.21	\$	2,509,091		1.21	\$	2,509,091		1.21	\$	2,509,091
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000		1.21	\$	654,545		1.21	\$	654,545		1.21	\$	654,545
3	Wayside Protection System	Mile	\$	108,000		1.21	\$	130,909		1.21	\$	130,909		1.21	\$	130,909
Electrification Items																
1	Traction Power supply	Mile	\$	1,170,000		1.21	\$	1,418,182		1.21	\$	1,418,182		1.21	\$	1,418,182
2	Traction Power Distribution	Mile	\$	1,485,000		1.21	\$	1,800,000		1.21	\$	1,800,000		1.21	\$	1,800,000
Subtotal							\$	393,853,830			\$	247,807,094			\$	498,226,786
Program Implementation Costs (per screening)							\$	100,432,727			\$	63,190,809			\$	127,047,830
Program Implementation Costs																
Contingencies (per screening) (25%)							\$	98,463,457			\$	61,951,774			\$	124,556,696
Subtotal							\$	592,750,014			\$	372,949,677			\$	749,831,313
Subtotal (Rounded)							\$	593,000,000			\$	373,000,000			\$	750,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (2 tracks)				Elevated Viaduct (4 tracks)				At-Grade (2 tracks)				At-Grade (4 tracks)						
Subsection 6			Base: 2009 (3rd Quarter)	B				B				B				B							
				Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles					
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Double Track Elevated (Mile)					Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles				
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Section - Total																							
1 Double Track Section - At Grade	Mile	\$	2,100,224			0	\$	-			0	\$	-			0.68	\$	1,431,971			0.00	\$	-
2 Double Track Section - On Structure	Mile	\$	4,700,160			0.68	\$	3,204,655			0	\$	-			0.00	\$	-			0.00	\$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0	\$	-			0	\$	-			0.00	\$	-			0.00	\$	-
4 Double Track Section - In Trench	Mile	\$	4,700,160			0	\$	-			0	\$	-			0.00	\$	-			0.00	\$	-
Four Track Section - Total																							
Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-			0.00	\$	-			0.00	\$	-			0.68	\$	2,863,942
Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$	-			0.68	\$	6,409,309			0	\$	-			0	\$	-
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0	\$	-			0	\$	-			0	\$	-			0	\$	-
Four-Track Section - In Trench	Mile	\$	9,400,320			0	\$	-			0	\$	-			0	\$	-			0	\$	-
Single Track - Total																							
5 Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-			0	\$	-
6 Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-			0	\$	-
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-			0	\$	-
8 Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-			0	\$	-
9 Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-			0	\$	-			0	\$	-			0	\$	-
10 Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-			0	\$	-
Earthwork Items																							
1 Site Preparation - Undeveloped	Acre	\$	9,216			0	\$	-			9.090909091	\$	83,782			5.37	\$	49,507			9.09	\$	83,782
2 Total Cut	CY	\$	6.00			0	\$	-			0	\$	-			0	\$	-			0	\$	-
3 Total Fill	CY	\$	6.00			0	\$	-			0	\$	-			0	\$	-			0	\$	-
4 Borrow	CY	\$	13.00			0.00	\$	-			0.00	\$	-			0.00	\$	-			0.00	\$	-
5 Spoil	CY	\$	13.00			0.00	\$	-			0.00	\$	-			0.00	\$	-			0.00	\$	-
6 Landscape erosion Control	Acre	\$	6,144			0.00	\$	-			0.00	\$	-			0.00	\$	-			0.00	\$	-
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-			0.00	\$	-			0.68	\$	98,444			0.68	\$	98,444
8 Special Drainage Facilities	5% Earthwork					\$		-			\$	4,189			\$	7,398				\$		9,111	
Structures, Tunnels, Walls																							
1 Standard Structure (2 tracks)	Mile	\$	34,972,672			0.68	\$	23,845,004			0.00	\$	-			0.00 Miles	\$	-			0.00 Miles	\$	-
Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00					0.68	\$	35,767,505			0.00 Miles					0.00 Miles		
2 High Structure	Mile	\$	40,424,448				\$	-				\$	-				\$	-				\$	-
3 Long Span Structure	Mile	\$	61,919,232				\$	-				\$	-				\$	-				\$	-
4 Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-				\$	-				\$	-				\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$	-				\$	-				\$	-				\$	-
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-				\$	-				\$	-				\$	-
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-				\$	-				\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-				\$	-				\$	-				\$	-
9 Double Track Drill & Blast	Mile	\$	146,887,680			0	\$	-			0	\$	-			0	\$	-			0	\$	-
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-				\$	-				\$	-				\$	-
Double Track TBM (<6 Miles)	Mile	\$	106,637,312																				
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																				
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-				\$	-				\$	-				\$	-
12 Crossovers	ea	\$	442,368				\$	-				\$	-				\$	-				\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0	\$	-			0	\$	-			0	\$	-			0	\$	-
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0.00 Miles	\$	-			0.00 Miles	\$	-			0.00 Miles	\$	-			0.00 Miles	\$	-
Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336			0.00 Miles					0.00 Miles					0.00 Miles					0.00 Miles		
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-				\$	-				\$	-				\$	-
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																				
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0	\$	-			0	\$	-			0	\$	-			0	\$	-
17 Retaining Walls	Mile	\$	8,613,888			0	\$	-			0	\$	-			0	\$	-			0	\$	-
18 Containment Walls	Mile	\$	5,907,456				\$	-				\$	-				\$	-				\$	-
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-				\$	-				\$	-				\$	-
Four Track Drill & Blast	Mile	\$	293,775,360				\$	-				\$	-				\$	-				\$	-
Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-				\$	-				\$	-				\$	-
Four Track TBM (<6 Miles)	Mile	\$	213,274,624																				
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792																				
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			0.00	\$	-			0.00	\$	-			0.00	\$	-
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																				
Grade Separations																							
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-				\$	-				\$	-				\$	-



COST ELEMENTS		UNIT	UNIT PRICE	Elevated Viaduct (2 tracks)				Elevated Viaduct (4 tracks)				At-Grade (2 tracks)				At-Grade (4 tracks)			
Subsection 6		Base: 2009 (3rd Quarter)		B				B				B				B			
				Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles	
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles	
Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
1	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$ -				\$ -	1			\$ 19,926,528			1	\$ 19,926,528
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -				\$ -				\$ -				\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -				\$ -				\$ -				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -				\$ -				\$ -				\$ -
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -				\$ -				\$ -				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -				\$ -				\$ -				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -				\$ -				\$ -				\$ -
7	Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -				\$ -				\$ -				\$ -
8	Minor Crossing Closures	ea	\$ 87,040				\$ -				\$ -				\$ -				\$ -
Building Items																			
1	Intermediate Passenger Stations	Each	\$ -				\$ -				\$ -				\$ -				\$ -
2	Terminal Passenger Stations	Each	\$ -				\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -				\$ -				\$ -				\$ -
3	Maintenance Facility	Each	\$ 123,921,884				\$ -				\$ -				\$ -				\$ -
4	Parking - Structures	space	\$ -				\$ -				\$ -				\$ -				\$ -
5	Parking - At Grade	space	\$ -				\$ -				\$ -				\$ -				\$ -
Rail & Utility Relocation																			
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -				\$ -
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -				\$ -				\$ -
3	Single Track Removal	Mile	\$ 130,048				\$ -				\$ -				\$ -				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -				\$ -				\$ -
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -				\$ -				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -				\$ -				\$ -
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -				\$ -				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -				\$ -				\$ -
ROW (Not Included)																			
ROW required for each segment																			
1	Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -				\$ -
2	Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -				\$ -
3	Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -				\$ -
4	Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -				\$ -
5	Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -				\$ -
ROW required for Temp. Construction Easement																			
1	Dense Urban	Acre					\$ -				\$ -				\$ -				\$ -
2	Urban	Acre					\$ -				\$ -				\$ -				\$ -
3	Dense Suburban	Acre					\$ -				\$ -				\$ -				\$ -
4	Suburban	Acre					\$ -				\$ -				\$ -				\$ -
5	Undeveloped	Acre					\$ -				\$ -				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities																			
6	Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -				\$ -				\$ -
7	Urban	Acre	\$ 1,371,510				\$ -				\$ -				\$ -				\$ -
8	Dense Suburban	Acre	\$ 908,134				\$ -				\$ -				\$ -				\$ -
9	Suburban	Acre	\$ 208,418				\$ -				\$ -				\$ -				\$ -
10	Undeveloped	Acre	\$ 3,642				\$ -				\$ -				\$ -				\$ -
	Environmental Mitigation = 3% Line Costs						\$ 811,490				\$ 1,267,944				\$ 645,415				\$ 689,454
System Elements																			
1	Signaling (ATC)	Mile	\$ 2,070,000			0.68	\$ 1,411,364			0.68	\$ 1,411,364			0.68	\$ 1,411,364			0.68	\$ 1,411,364
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.68	\$ 368,182			0.68	\$ 368,182			0.68	\$ 368,182			0.68	\$ 368,182
3	Wayside Protection System	Mile	\$ 108,000			0.68	\$ 73,636			0.68	\$ 73,636			0.68	\$ 73,636			0.68	\$ 73,636
Electrification Items																			
1	Traction Power supply	Mile	\$ 1,170,000			0.68	\$ 797,727			0.68	\$ 797,727			0.68	\$ 797,727			0.68	\$ 797,727
2	Traction Power Distribution	Mile	\$ 1,485,000			0.68	\$ 1,012,500			0.68	\$ 1,012,500			0.68	\$ 1,012,500			0.68	\$ 1,012,500
Subtotal							\$ 31,524,557				\$ 47,196,138				\$ 25,822,672				\$ 27,334,670
Program Implementation Costs (per screening)							\$ 8,038,762				\$ 12,035,015				\$ 6,584,781				\$ 6,970,341
Program Implementation Costs																			
Contingencies (per screening) (25%)							\$ 7,881,139				\$ 11,799,035				\$ 6,455,668				\$ 6,833,667
Subtotal							\$ 47,444,458				\$ 71,030,188				\$ 38,863,121				\$ 41,138,678
Subtotal (Rounded)							\$ 47,000,000				\$ 71,000,000				\$ 39,000,000				\$ 41,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (HST only)				
Subsection 6				Base: 2009 (3rd Quarter)	B				B				B				B				
					Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		
Double Track Trench (Mile)					Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Section - Total																					
1 Double Track Section - At Grade	Mile	\$	2,100,224				0.00	\$ -				0.00	\$ -			0.00	\$ -			0.00	\$ -
2 Double Track Section - On Structure	Mile	\$	4,700,160				0.00	\$ -				0.00	\$ -			0.00	\$ -			0.00	\$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				0.00	\$ -				0.00	\$ -			0.00	\$ -			0.68	\$ 3,196,109
4 Double Track Section - In Trench	Mile	\$	4,700,160				0.68	\$ 3,204,655				0.00	\$ -			0.00	\$ -			0.00	\$ -
Four Track Section - Total																					
Four-track Section - At Grade	Mile	\$	4,200,448				0.00	\$ -				0.00	\$ -			0.00	\$ -			0.00	\$ -
Four-Track Section - On Structure	Mile	\$	9,400,320				0.00	\$ -				0.00	\$ -			0.00	\$ -			0.00	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0.00	\$ -				0.00	\$ -			0.68	\$ 6,409,309			0.00	\$ -
Four-Track Section - In Trench	Mile	\$	9,400,320				0.00	\$ -				0.68	\$ 6,409,309			0.00	\$ -			0.00	\$ -
Single Track - Total																					
5 Single Track Section - At Grade	Mile	\$	1,549,312				0	\$ -				0	\$ -			0	\$ -			0	\$ -
6 Single Track Section - On structure	Mile	\$	2,350,080				0	\$ -				0	\$ -			0	\$ -			0	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0	\$ -				0	\$ -			0	\$ -			0	\$ -
8 Single Track Section - In Trench	Mile	\$	2,350,080				0	\$ -				0	\$ -			0	\$ -			0	\$ -
9 Freight Double Track - At Grade	Mile	\$	2,839,552				0	\$ -				0	\$ -			0	\$ -			0	\$ -
10 Freight Single Track - At Grade	Mile	\$	1,549,312				0	\$ -				0	\$ -			0	\$ -			0	\$ -
Earthwork Items																					
1 Site Preparation - Undeveloped	Acre	\$	9,216				5.37	\$ 49,507				9.09	\$ 83,782			9.09	\$ 83,782			0.00	\$ -
2 Total Cut	CY	\$	6.00				586666.6667	\$ 3,520,000				586666.6667	\$ 3,520,000			586666.67	\$ 3,520,000			0.00	\$ -
3 Total Fill	CY	\$	6.00				0	\$ -				0	\$ -			293333.33	\$ 1,760,000			0.00	\$ -
4 Borrow	CY	\$	13.00				0.00	\$ -				0.00	\$ -			0.00	\$ -			0.00	\$ -
5 Spoil	CY	\$	13.00				586666.67	\$ 7,626,667				586666.67	\$ 7,626,667			293333.33	\$ 3,813,333			0.00	\$ -
6 Landscape erosion Control	Acre	\$	6,144				0.00	\$ -				9.09	\$ 55,855			0.00	\$ -			0.00	\$ -
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.00	\$ -				0.68	\$ 98,444			0.00	\$ -			0.00	\$ -
8 Special Drainage Facilities	5% Earthwork							\$ 559,809					\$ 569,237				\$ 458,856				\$ -
Structures, Tunnels, Walls																					
1 Standard Structure (2 tracks)	Mile	\$	34,972,672				0.00 Miles	\$ -				0.00 Miles	\$ -			0.00 Miles	\$ -			0.00 Miles	\$ -
Standard Structure (4 tracks)	Mile	\$	52,459,008				0.00 Miles					0.00 Miles				0.00 Miles				0.00 Miles	
2 High Structure	Mile	\$	40,424,448					\$ -					\$ -				\$ -				\$ -
3 Long Span Structure	Mile	\$	61,919,232					\$ -					\$ -				\$ -				\$ -
4 Waterway Crossing - Primary	Mile	\$	85,342,208					\$ -					\$ -				\$ -				\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408					\$ -					\$ -			0.01	\$ 697,344			0.01	\$ 697,344
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264					\$ -					\$ -				\$ -				\$ -
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312					\$ -					\$ -				\$ -				\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896					\$ -					\$ -				\$ -				\$ -
9 Double Track Drill & Blast	Mile	\$	146,887,680				0	\$ -				0	\$ -			0	\$ -			0.00	\$ -
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000					\$ -					\$ -				\$ -			0.00	\$ -
Double Track TBM (<6 Miles)	Mile	\$	106,637,312				0									0				0.00	\$ -
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896				0.00 Miles						0.00 Miles			0.00 Miles			0.68	\$ 120,491,520	
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952					\$ -					\$ -			0.00 Miles				\$ -	\$ -
12 Crossovers	ea	\$	442,368					\$ -					\$ -				\$ -				\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				0.00	\$ -				0.00	\$ -			0	\$ -			0.00	\$ -
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224				0.68	\$ 39,221,062				0.00	\$ -			0.00	\$ -			0.00	\$ -
Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336				0.00	\$ -				0.68	\$ 58,831,593			0.00				0.00	\$ -
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904					\$ -					\$ -				\$ -				\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																		
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				0.00	\$ -				0.00	\$ -			0.68	\$ 8,078,662			0.68	\$ 8,078,662
17 Retaining Walls	Mile	\$	8,613,888				0.00	\$ -				0.00	\$ -			0.00	\$ -			0.00	\$ -
18 Containment Walls	Mile	\$	5,907,456				0.00	\$ -				0.00	\$ -				\$ -				\$ -
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080					\$ -					\$ -				\$ -				\$ -
Four Track Drill & Blast	Mile	\$	293,775,360					\$ -					\$ -				\$ -				\$ -
Four Track Mined (Soft Soil)	Mile	\$	158,400,000					\$ -					\$ -				\$ -				\$ -
Four Track TBM (<6 Miles)	Mile	\$	213,274,624																	0.00	\$ -
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792																	0.00	\$ -
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00	\$ -				0.00	\$ -			0.68	\$ 178,971,927			0.00	\$ -
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																		\$ -
Grade Separations																					
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352					\$ -					\$ -				\$ -				\$ -



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (HST only)				
Subsection 6			Base: 2009 (3rd Quarter)	B				B				B				B					
				Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles			
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles	
Double Track Trench (Mile)						Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1829 + 00	End: 1865 + 00	0.68 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
2	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528					\$ -			\$ -			\$ -			\$ -			\$ -	
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680					\$ -			\$ -			\$ -			\$ -			\$ -	
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568					\$ -			\$ -			\$ -			\$ -			\$ -	
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520					\$ -			\$ -			\$ -			\$ -			\$ -	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216					\$ -			\$ -			\$ -			\$ -			\$ -	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816					\$ -			\$ -			\$ -			\$ -			\$ -	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328					\$ -			\$ -			\$ -			\$ -			\$ -	
7	Street Bridging HSR Trench	ea	\$ 1,398,784			1	\$ 1,398,784			1	\$ 1,398,784			0	\$ -			0	\$ -		
8	Minor Crossing Closures	ea	\$ 87,040				\$ -				\$ -			\$ -			\$ -			\$ -	
Building Items																					
1	Intermediate Passenger Stations	Each	\$ -				\$ -				\$ -			\$ -			\$ -			\$ -	
2	Terminal Passenger Stations	Each	\$ -				\$ -				\$ -			\$ -			\$ -			\$ -	
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -				\$ -			\$ -			\$ -			\$ -	
	Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -				\$ -			\$ -			\$ -			\$ -	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -				\$ -			\$ -			\$ -			\$ -	
	Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -				\$ -			\$ -			\$ -			\$ -	
3	Maintenance Facility	Each	\$ 123,921,884				\$ -				\$ -			\$ -			\$ -			\$ -	
4	Parking - Structures	space	\$ -				\$ -				\$ -			\$ -			\$ -			\$ -	
5	Parking - At Grade	space	\$ -				\$ -				\$ -			\$ -			\$ -			\$ -	
Rail & Utility Relocation																					
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -				\$ -			\$ -			\$ -			\$ -	
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -				\$ -			\$ -			\$ -			\$ -	
3	Single Track Removal	Mile	\$ 130,048				\$ -				\$ -			\$ -			\$ -			\$ -	
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -				\$ -			\$ -			\$ -			\$ -	
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -				\$ -			\$ -			\$ -			\$ -	
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -				\$ -			\$ -			\$ -			\$ -	
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -				\$ -			\$ -			\$ -			\$ -	
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -				\$ -			\$ -			\$ -			\$ -	
ROW (Not Included)																					
ROW required for each segment																					
1	Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -			\$ -			\$ -			\$ -	
2	Urban	Acre	\$ 1,371,510				\$ -				\$ -			\$ -			\$ -			\$ -	
3	Dense Suburban	Acre	\$ 908,134				\$ -				\$ -			\$ -			\$ -			\$ -	
4	Suburban	Acre	\$ 208,418				\$ -				\$ -			\$ -			\$ -			\$ -	
5	Undeveloped	Acre	\$ 3,642				\$ -				\$ -			\$ -			\$ -			\$ -	
ROW required for Temp. Construction Easement																					
1	Dense Urban	Acre					\$ -				\$ -			\$ -			\$ -			\$ -	
2	Urban	Acre					\$ -				\$ -			\$ -			\$ -			\$ -	
3	Dense Suburban	Acre					\$ -				\$ -			\$ -			\$ -			\$ -	
4	Suburban	Acre					\$ -				\$ -			\$ -			\$ -			\$ -	
5	Undeveloped	Acre					\$ -				\$ -			\$ -			\$ -			\$ -	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																					
6	Dense Urban	Acre	\$ 2,786,321				\$ -				\$ -			\$ -			\$ -			\$ -	
7	Urban	Acre	\$ 1,371,510				\$ -				\$ -			\$ -			\$ -			\$ -	
8	Dense Suburban	Acre	\$ 908,134				\$ -				\$ -			\$ -			\$ -			\$ -	
9	Suburban	Acre	\$ 208,418				\$ -				\$ -			\$ -			\$ -			\$ -	
10	Undeveloped	Acre	\$ 3,642				\$ -				\$ -			\$ -			\$ -			\$ -	
	Environmental Mitigation = 3% Line Costs						\$ 1,667,414				\$ 2,357,810				\$ 6,113,796				\$ 3,973,909		
System Elements																					
1	Signaling (ATC)	Mile	\$ 2,070,000			0.68	\$ 1,411,364			0.68	\$ 1,411,364			0.68	\$ 1,411,364			0.68	\$ 1,411,364		
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.68	\$ 368,182			0.68	\$ 368,182			0.68	\$ 368,182			0.68	\$ 368,182		
3	Wayside Protection System	Mile	\$ 108,000			0.68	\$ 73,636			0.68	\$ 73,636			0.68	\$ 73,636			0.68	\$ 73,636		
Electrification Items																					
1	Traction Power supply	Mile	\$ 1,170,000			0.68	\$ 797,727			0.68	\$ 797,727			0.68	\$ 797,727			0.68	\$ 797,727		
2	Traction Power Distribution	Mile	\$ 1,485,000			0.68	\$ 1,012,500			0.68	\$ 1,012,500			0.68	\$ 1,012,500			0.68	\$ 1,012,500		
	Subtotal						\$ 60,911,307				\$ 84,614,889				\$ 213,570,419				\$ 140,100,953		
	Program Implementation Costs (per screening)						\$ 15,532,383				\$ 21,576,797				\$ 54,460,457				\$ 35,725,743		
	Program Implementation Costs																				
	Contingencies (per screening) (25%)						\$ 15,227,827				\$ 21,153,722				\$ 53,392,605				\$ 35,025,238		
	Subtotal						\$ 91,671,517				\$ 127,345,408				\$ 321,423,480				\$ 210,851,934		
	Subtotal (Rounded)						\$ 92,000,000				\$ 127,000,000				\$ 321,000,000				\$ 211,000,000		



COST ELEMENTS			UNIT	UNIT PRICE	Hybrid (2 tracks over 2 tracks)			
Subsection 6			Base: 2009 (3rd Quarter)	B				
				Start: 1829 + 00	End: 1865 + 00	0.68 Miles		
Subsection Details						Quant.	Cost	
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)				Start: 1829 + 00	End: 1865 + 00	0.68 Miles		
Double Track Trench (Mile)				Start: 1829 + 00	End: 1865 + 00	0.68 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Section - Total								
1 Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$	-
2 Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.68	\$	3,204,655
4 Double Track Section - In Trench	Mile	\$	4,700,160			0.68	\$	3,204,655
						0	\$	-
						0	\$	-
						0	\$	-
						0	\$	-
Four Track Section - Total								
Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-
Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$	-
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$	-
Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$	-
Single Track - Total								
5 Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-
6 Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-
8 Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-
9 Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-
10 Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-
Earthwork Items								
1 Site Preparation - Undeveloped	Acre	\$	9,216			14.46	\$	133,289
2 Total Cut	CY	\$	6.00			933333.33	\$	5,600,000
3 Total Fill	CY	\$	6.00			0.00	\$	-
4 Borrow	CY	\$	13.00			0.00	\$	-
5 Spoil	CY	\$	13.00			933333.33	\$	12,133,333
6 Landscape erosion Control	Acre	\$	6,144			0.00	\$	-
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.68	\$	98,444
8 Special Drainage Facilities	5% Earthwork						\$	898,253
Structures, Tunnels, Walls								
1 Standard Structure (2 tracks)	Mile	\$	34,972,672			0	\$	-
Standard Structure (4 tracks)	Mile	\$	52,459,008					
2 High Structure	Mile	\$	40,424,448				\$	-
3 Long Span Structure	Mile	\$	61,919,232				\$	-
4 Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.01	\$	697,344
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-
9 Double Track Drill & Blast	Mile	\$	146,887,680				\$	-
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-
Double Track TBM (<6 Miles)	Mile	\$	106,637,312					
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896					
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-
12 Crossovers	ea	\$	442,368				\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$	-
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0	\$	-
Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336					
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856					
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0.68	\$	8,078,662
17 Retaining Walls	Mile	\$	8,613,888			0	\$	-
18 Containment Walls	Mile	\$	5,907,456			0	\$	-
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-
Four Track Drill & Blast	Mile	\$	293,775,360				\$	-
Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-
Four Track TBM (<6 Miles)	Mile	\$	213,274,624					
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792					
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114			0.68	\$	223,991,669
Grade Separations								
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-



COST ELEMENTS		UNIT	UNIT PRICE	Hybrid (2 tracks over 2 tracks)			
Subsection 6			Base: 2009 (3rd Quarter)	B			
				Start: 1829 + 00	End: 1865 + 00	0.68 Miles	
Subsection Details						Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 1829 + 00	End: 1865 + 00	0.68 Miles	
Double Track Trench (Mile)				Start: 1829 + 00	End: 1865 + 00	0.68 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -
7	Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -
8	Minor Crossing Closures	ea	\$ 87,040				\$ -
Building Items							
1	Intermediate Passenger Stations	Each	\$ -				\$ -
2	Terminal Passenger Stations	Each	\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -
3	Maintenance Facility	Each	\$ 123,921,884				\$ -
4	Parking - Structures	space	-				\$ -
5	Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation							
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -
3	Single Track Removal	Mile	\$ 130,048				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
ROW (Not Included)							
ROW required for each segment							
1	Dense Urban	Acre	\$ 2,786,321				\$ -
2	Urban	Acre	\$ 1,371,510				\$ -
3	Dense Suburban	Acre	\$ 908,134				\$ -
4	Suburban	Acre	\$ 208,418				\$ -
5	Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement							
1	Dense Urban	Acre					\$ -
2	Urban	Acre					\$ -
3	Dense Suburban	Acre					\$ -
4	Suburban	Acre					\$ -
5	Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities							
6	Dense Urban	Acre	\$ 2,786,321				\$ -
7	Urban	Acre	\$ 1,371,510				\$ -
8	Dense Suburban	Acre	\$ 908,134				\$ -
9	Suburban	Acre	\$ 208,418				\$ -
10	Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs							\$ 7,741,209
System Elements							
1	Signaling (ATC)	Mile	\$ 2,070,000			0.68	\$ 1,411,364
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.68	\$ 368,182
3	Wayside Protection System	Mile	\$ 108,000			0.68	\$ 73,636
Electrification Items							
1	Traction Power supply	Mile	\$ 1,170,000			0.68	\$ 797,727
2	Traction Power Distribution	Mile	\$ 1,485,000			0.68	\$ 1,012,500
	Subtotal						\$ 269,444,921
Program Implementation Costs (per screening)							\$ 68,708,455
Program Implementation Costs							
Contingencies (per screening) (25%)							\$ 67,361,230
Subtotal							\$ 405,514,607
Subtotal (Rounded)							\$ 406,000,000



COST ELEMENTS				UNIT	UNIT PRICE	Elevated Viaduct (2 tracks)				Elevated Viaduct (4 tracks)				At-Grade (2 tracks)				At-Grade (4 tracks)				
Subsection 6					Base: 2009 (3rd Quarter)	C				C				C				C				
						Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)					Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles			
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Section - Total																						
1 Double Track Section - At Grade					Mile	\$	2,100,224				0	\$	-			1.42	\$	2,983,273		0.00	\$	-
2 Double Track Section - On Structure					Mile	\$	4,700,160				1.42	\$	6,676,364			0.00	\$	-		0.00	\$	-
3 Double Track Section - In Tunnel or Subway					Mile	\$	4,700,160				0	\$	-			0.00	\$	-		0.00	\$	-
4 Double Track Section - In Trench					Mile	\$	4,700,160				0	\$	-			0.00	\$	-		0.00	\$	-
Four Track Section - Total																						
Four-track Section - At Grade					Mile	\$	4,200,448				0.00	\$	-			0.00	\$	-		1.42	\$	5,966,545
Four-Track Section - On Structure					Mile	\$	9,400,320				1.42	\$	13,352,727			0.00	\$	-		0.00	\$	-
Four-Track Section - In Tunnel or Subway					Mile	\$	9,400,320				0	\$	-			0	\$	-		0	\$	-
Four-Track Section - In Trench					Mile	\$	9,400,320				0	\$	-			0	\$	-		0	\$	-
Single Track - Total																						
5 Single Track Section - At Grade					Mile	\$	1,549,312				0	\$	-			0	\$	-		0	\$	-
6 Single Track Section - On structure					Mile	\$	2,350,080				0	\$	-			0	\$	-		0	\$	-
7 Single Track Section - In Tunnel or Subway					Mile	\$	2,350,080				0	\$	-			0	\$	-		0	\$	-
8 Single Track Section - In Trench					Mile	\$	2,350,080				0	\$	-			0	\$	-		0	\$	-
9 Freight Double Track - At Grade					Mile	\$	2,839,552				0	\$	-			0	\$	-		0	\$	-
10 Freight Single Track - At Grade					Mile	\$	1,549,312				0	\$	-			0	\$	-		0	\$	-
Earthwork Items																						
1 Site Preparation - Undeveloped					Acre	\$	9,216				11.19	\$	103,140			11.19	\$	103,140		18.94	\$	174,545
2 Total Cut					CY	\$	6.00				0.00	\$	-			0	\$	-		0	\$	-
3 Total Fill					CY	\$	6.00				0.00	\$	-			0	\$	-		0	\$	-
4 Borrow					CY	\$	13.00				0.00	\$	-			0.00	\$	-		0.00	\$	-
5 Spoil					CY	\$	13.00				0.00	\$	-			0.00	\$	-		0.00	\$	-
6 Landscape erosion Control					Acre	\$	6,144				0.00	\$	-			0.00	\$	-		0.00	\$	-
7 Security Fencing (Both sides of ROW)					Mile	\$	144,384				0.00	\$	-			1.42	\$	205,091		1.42	\$	205,091
8 Special Drainage Facilities					5% Earthwork			\$	5,157			\$	8,727				\$	15,412			\$	18,982
Structures, Tunnels, Walls																						
1 Standard Structure (2 tracks)					Mile	\$	34,972,672				1.42	\$	49,677,091			0.00	\$	-		0.00	\$	-
Standard Structure (4 tracks)					Mile	\$	52,459,008				0.00				1.42	\$	74,515,636		0.00			
2 High Structure					Mile	\$	40,424,448					\$	-				\$	-			\$	-
3 Long Span Structure					Mile	\$	61,919,232					\$	-				\$	-			\$	-
4 Waterway Crossing - Primary					Mile	\$	85,342,208					\$	-				\$	-			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)					Mile	\$	92,049,408					\$	-			0.01	\$	871,680		0.01	\$	871,680
6 Twin Single Track Drill&Blast (<6 Miles)					Mile	\$	142,731,264					\$	-				\$	-			\$	-
7 Twin Single Track TBM (<6 Miles)					Mile	\$	106,637,312					\$	-				\$	-			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)					Mile	\$	176,720,896					\$	-				\$	-			\$	-
9 Double Track Drill & Blast					Mile	\$	146,887,680				0	\$	-			0	\$	-		0	\$	-
10 Double Track Mined (Soft Soil)					Mile	\$	79,200,000					\$	-				\$	-			\$	-
Double Track TBM (<6 Miles)					Mile	\$	106,637,312					\$	-				\$	-			\$	-
Double Track TBM w/3rd Tube (>6 Miles)					Mile	\$	176,720,896					\$	-				\$	-			\$	-
11 Seismic Chamber (Drill & Blast/Mined)					ea	\$	126,205,952					\$	-				\$	-			\$	-
12 Crossovers					ea	\$	442,368					\$	-				\$	-			\$	-
13 Cut & Cover Double Track Tunnel					Mile	\$	131,246,080				0	\$	-			0	\$	-		0	\$	-
14 Trench Long (2 tracks) (1000 ft+)					Mile	\$	57,524,224				0.00 Miles	\$	-			0.00 Miles	\$	-		0.00 Miles	\$	-
Trench Long (4 tracks) (1000 ft+)					Mile	\$	86,286,336				0.00 Miles					0.00 Miles				0.00 Miles		
15 Trench Short (2 tracks) (<1000 ft)					Mile	\$	78,843,904					\$	-				\$	-			\$	-
Trench Short (4 tracks) (<1000 ft)					Mile	\$	118,265,856															
16 Mechanical & Electrical for Tunnels					Mile	\$	11,848,704				0	\$	-			0	\$	-		0	\$	-
17 Retaining Walls					Mile	\$	8,613,888				0	\$	-			0	\$	-		0	\$	-
18 Containment Walls					Mile	\$	5,907,456					\$	-				\$	-			\$	-
19 Single Track Cut and Cover Subway					Mile	\$	131,246,080					\$	-				\$	-			\$	-
Four Track Drill & Blast					Mile	\$	293,775,360					\$	-				\$	-			\$	-
Four Track Mined (Soft Soil)					Mile	\$	158,400,000					\$	-				\$	-			\$	-
Four Track TBM (<6 Miles)					Mile	\$	213,274,624					\$	-				\$	-			\$	-
Four Track TBM w/3rd Tube (>6 Miles)					Mile	\$	353,441,792					\$	-				\$	-			\$	-
Four Track Cut & Cover Tunnel					Mile	\$	262,492,160				0.00	\$	-			0.00	\$	-		0.00	\$	-
Double Deck with Double Track Cut and Cover Box					Mile	\$	328,521,114															
Grade Separations																						
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)					ea	\$	13,284,352					\$	-				\$	-			\$	-



COST ELEMENTS				UNIT	UNIT PRICE	Elevated Viaduct (2 tracks)				Elevated Viaduct (4 tracks)				At-Grade (2 tracks)				At-Grade (4 tracks)							
Subsection 6				Base: 2009 (3rd Quarter)	C				C				C				C								
					Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles						
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost					
Double Track At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Double Track Elevated (Mile)						Start: 1865 + 00	End: 1940 + 00	1.42 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00			0.00 Miles						
Double Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00			0.00 Miles						
Double Track Trench (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00			0.00 Miles						
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles				
Four Track Elevated (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 1865 + 00	End: 1940 + 00	1.42 Miles			Start: 0 + 00	End: 0 + 00		0.00 Miles						
Four Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00			0.00 Miles						
Four Track Trench (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00			0.00 Miles						
1	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528					\$	-				\$	-			\$	-			\$	-		
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680					\$	-				\$	-			\$	-			\$	-		
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568					\$	-				\$	-			\$	-			\$	-		
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520					\$	-				\$	-			\$	-			\$	-		
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216					\$	-				\$	-			\$	-			\$	-		
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816					\$	-				\$	-			\$	-			\$	-		
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328					\$	-				\$	-			\$	-			\$	-		
7	Street Bridging HSR Trench	ea	\$	1,398,784					\$	-				\$	-			\$	-			\$	-		
8	Minor Crossing Closures	ea	\$	87,040					\$	-				\$	-			\$	-			\$	-		
Building Items																									
1	Intermediate Passenger Stations	Each	\$	-					\$	-				\$	-			\$	-			\$	-		
2	Terminal Passenger Stations	Each	\$	-					\$	-				\$	-			\$	-			\$	-		
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000					\$	-				\$	-			\$	-			\$	-		
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000			1	15,000,000				1	15,000,000			0	\$	-			1	\$	15,000,000		
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000					\$	-				\$	-			\$	-			\$	-		
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000					\$	-				\$	-			\$	-			\$	-		
3	Maintenance Facility	Each	\$	123,921,884					\$	-				\$	-			\$	-			\$	-		
4	Parking - Structures	space	\$	-					\$	-				\$	-			\$	-			\$	-		
5	Parking - At Grade	space	\$	-					\$	-				\$	-			\$	-			\$	-		
Rail & Utility Relocation																									
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896					\$	-				\$	-			\$	-			\$	-		
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896					\$	-				\$	-			\$	-			\$	-		
3	Single Track Removal	Mile	\$	130,048					\$	-				\$	-			\$	-			\$	-		
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288					\$	-				\$	-			\$	-			\$	-		
5	Major Utility Relocations - Urban	Mile	\$	1,084,416					\$	-				\$	-			\$	-			\$	-		
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168					\$	-				\$	-			\$	-			\$	-		
7	Major Utility Relocations - Suburban	Mile	\$	464,896					\$	-				\$	-			\$	-			\$	-		
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720					\$	-				\$	-			\$	-			\$	-		
ROW (Not Included)																									
ROW required for each segment																									
1	Dense Urban	Acre	\$	2,786,321					\$	-				\$	-			\$	-			\$	-		
2	Urban	Acre	\$	1,371,510					\$	-				\$	-			\$	-			\$	-		
3	Dense Suburban	Acre	\$	908,134					\$	-				\$	-			\$	-			\$	-		
4	Suburban	Acre	\$	208,418					\$	-				\$	-			\$	-			\$	-		
5	Undeveloped	Acre	\$	3,642					\$	-				\$	-			\$	-			\$	-		
ROW required for Temp. Construction Easement																									
1	Dense Urban	Acre							\$	-				\$	-			\$	-			\$	-		
2	Urban	Acre							\$	-				\$	-			\$	-			\$	-		
3	Dense Suburban	Acre							\$	-				\$	-			\$	-			\$	-		
4	Suburban	Acre							\$	-				\$	-			\$	-			\$	-		
5	Undeveloped	Acre							\$	-				\$	-			\$	-			\$	-		
Right-of-Way Required for Stations, Maintenance & Parking Facilities																									
6	Dense Urban	Acre	\$	2,786,321					\$	-				\$	-			\$	-			\$	-		
7	Urban	Acre	\$	1,371,510					\$	-				\$	-			\$	-			\$	-		
8	Dense Suburban	Acre	\$	908,134					\$	-				\$	-			\$	-			\$	-		
9	Suburban	Acre	\$	208,418					\$	-				\$	-			\$	-			\$	-		
10	Undeveloped	Acre	\$	3,642					\$	-				\$	-			\$	-			\$	-		
Environmental Mitigation = 3% Line Costs									\$	2,143,853				\$	3,091,549			\$	125,358			\$	667,105		
System Elements																									
1	Signaling (ATC)	Mile	\$	2,070,000			1.42	\$	2,940,341				1.42	\$	2,940,341			1.42	\$	2,940,341			1.42	\$	2,940,341
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.42	\$	767,045				1.42	\$	767,045			1.42	\$	767,045			1.42	\$	767,045
3	Wayside Protection System	Mile	\$	108,000			1.42	\$	153,409				1.42	\$	153,409			1.42	\$	153,409			1.42	\$	153,409
Electrification Items																									
1	Traction Power supply	Mile	\$	1,170,000			1.42	\$	1,661,932				1.42	\$	1,661,932			1.42	\$	1,661,932			1.42	\$	1,661,932
2	Traction Power Distribution	Mile	\$	1,485,000			1.42	\$	2,109,375				1.42	\$	2,109,375			1.42	\$	2,109,375			1.42	\$	2,109,375
Subtotal								\$	81,237,707				\$	113,775,288				\$	11,936,056				\$	30,536,051	
Program Implementation Costs (per screening)								\$	20,715,615				\$	29,012,698				\$	3,043,694				\$	7,786,693	
Program Implementation Costs																									
Contingencies (per screening) (25%)								\$	20,309,427				\$	28,443,822				\$	2,984,014				\$	7,634,013	
Subtotal								\$	122,262,749				\$	171,231,808				\$	17,963,764				\$	45,956,757	
Subtotal (Rounded)								\$122,000,000				\$171,000,000				\$ 18,000,000				\$ 46,000,000					



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (HST only)			
Subsection 6			Base: 2009 (3rd Quarter)	C				C				C				C				
				Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles	
Double Track Trench (Mile)					Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total																				
1 Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
2 Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -			1.42	\$ 6,676,364	
4 Double Track Section - In Trench	Mile	\$	4,700,160			1.42	\$ 6,676,364			0.00	\$ -			0.00	\$ -			0.00	\$ -	
Four Track Section - Total																				
Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$ -			0.00	\$ -			1.42	\$ 13,352,727			0.00	\$ -	
Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$ -			1.42	\$ 13,352,727			0.00	\$ -			0.00	\$ -	
Single Track - Total																				
5 Single Track Section - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -			0	\$ -	
6 Single Track Section - On structure	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -			0	\$ -	
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -			0	\$ -	
8 Single Track Section - In Trench	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -			0	\$ -	
9 Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$ -			0	\$ -			0	\$ -			0	\$ -	
10 Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -			0	\$ -	
Earthwork Items																				
1 Site Preparation - Undeveloped	Acre	\$	9,216			11.19	\$ 103,140			18.94	\$ 174,545			18.94	\$ 174,545			0.00	\$ -	
2 Total Cut	CY	\$	6.00			0.00	\$ -			458333.33	\$ 2,750,000			1222222.22	\$ 7,333,333			0.00	\$ -	
3 Total Fill	CY	\$	6.00			0.00	\$ -			0.00	\$ -			611111.11	\$ 3,666,667			0.00	\$ -	
4 Borrow	CY	\$	13.00			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
5 Spoil	CY	\$	13.00			0.00	\$ -			458333.33	\$ 5,958,333			611111.11	\$ 7,944,444			0.00	\$ -	
6 Landscape erosion Control	Acre	\$	6,144			0.00	\$ -			18.94	\$ 116,364			0.00	\$ -			0.00	\$ -	
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$ -			1.42	\$ 205,091			0.00	\$ -			0.00	\$ -	
8 Special Drainage Facilities	5% Earthwork					\$	5,157			\$	460,217			\$	955,949			\$	-	
Structures, Tunnels, Walls																				
1 Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00 Miles	\$ -			0.00 Miles	\$ -			0.00 Miles	\$ -			0.00 Miles	\$ -	
Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00 Miles				0.00 Miles				0.00 Miles				0.00 Miles		
2 High Structure	Mile	\$	40,424,448				\$ -				\$ -				\$ -				\$ -	
3 Long Span Structure	Mile	\$	61,919,232				\$ -				\$ -				\$ -				\$ -	
4 Waterway Crossing - Primary	Mile	\$	85,342,208				\$ -				\$ -				\$ -				\$ -	
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$ -				\$ -			0.01	\$ 697,344			0.01	\$ 697,344	
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$ -				\$ -				\$ -				\$ -	
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$ -				\$ -				\$ -				\$ -	
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$ -				\$ -				\$ -				\$ -	
9 Double Track Drill & Blast	Mile	\$	146,887,680			0	\$ -			0	\$ -			0	\$ -			0.00	\$ -	
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$ -				\$ -				\$ -				\$ -	
Double Track TBM (<6 Miles)	Mile	\$	106,637,312			0												0.00 Miles	\$ -	
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896			0.00 Miles												1.42 Miles	\$ 251,024,000	
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$ -				\$ -				\$ -			0.00 Miles	\$ -	
12 Crossovers	ea	\$	442,368				\$ -				\$ -				\$ -				\$ -	
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$ -			0.00	\$ -			0	\$ -			0.00	\$ -	
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			1.42	\$ 81,710,545			0.00	\$ -			0.00	\$ -			0.00	\$ -	
Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336			0.00	\$ -			1.42	\$ 122,565,818			0.00				0.00		
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$ -				\$ -				\$ -				\$ -	
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																	
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0.00	\$ -			0.00	\$ -			1.42	\$ 16,830,545			1.42	\$ 16,830,545	
17 Retaining Walls	Mile	\$	8,613,888			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
18 Containment Walls	Mile	\$	5,907,456			0.00	\$ -			0.00	\$ -				\$ -				\$ -	
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$ -				\$ -				\$ -				\$ -	
Four Track Drill & Blast	Mile	\$	293,775,360				\$ -				\$ -				\$ -				\$ -	
Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$ -				\$ -				\$ -			0.00	\$ -	
Four Track TBM (<6 Miles)	Mile	\$	213,274,624				\$ -				\$ -				\$ -			0.00	\$ -	
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792				\$ -				\$ -				\$ -				\$ -	
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$ -			0.00	\$ -			1.42	\$ 372,858,182			0.00	\$ -	
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																	
Grade Separations																				
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$ -				\$ -				\$ -				\$ -	



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (HST only)			
Subsection 6			Base: 2009 (3rd Quarter)	C				C				C				C				
				Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles	
Double Track Trench (Mile)					Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1865 + 00	End: 1940 + 00	1.42 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			\$	-			\$	-			\$	-			\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			\$	-			\$	-			\$	-			\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	-			\$	-			\$	-			\$	-
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			\$	-			\$	-			\$	-			\$	-
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			\$	-			\$	-			\$	-			\$	-
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			\$	-			\$	-			\$	-			\$	-
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328			\$	-			\$	-			\$	-			\$	-
7	Street Bridging HSR Trench	ea	\$	1,398,784		1	\$	1,398,784		1	\$	1,398,784			\$	-	0	\$	-	-
8	Minor Crossing Closures	ea	\$	87,040			\$	-			\$	-			\$	-			\$	-
Building Items							\$	-			\$	-			\$	-			\$	-
1	Intermediate Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-			\$	-
2	Terminal Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000			\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000			\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000			\$	-			\$	-			\$	-	0	\$	-	-
1	Caltrain Passenger Station - In Trench	Each	\$	15,000,000		1	\$	15,000,000		1	\$	15,000,000		1	\$	15,000,000			\$	-
3	Maintenance Facility	Each	\$	123,921,884			\$	-			\$	-			\$	-			\$	-
4	Parking - Structures	space	\$	-			\$	-			\$	-			\$	-			\$	-
5	Parking - At Grade	space	\$	-			\$	-			\$	-			\$	-			\$	-
Rail & Utility Relocation							\$	-			\$	-			\$	-			\$	-
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896			\$	-			\$	-			\$	-			\$	-
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896			\$	-			\$	-			\$	-			\$	-
3	Single Track Removal	Mile	\$	130,048			\$	-			\$	-			\$	-			\$	-
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288			\$	-			\$	-			\$	-			\$	-
5	Major Utility Relocations - Urban	Mile	\$	1,084,416			\$	-			\$	-			\$	-			\$	-
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168			\$	-			\$	-			\$	-			\$	-
7	Major Utility Relocations - Suburban	Mile	\$	464,896			\$	-			\$	-			\$	-			\$	-
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720			\$	-			\$	-			\$	-			\$	-
ROW (Not Included)							\$	-			\$	-			\$	-			\$	-
ROW required for each segment							\$	-			\$	-			\$	-			\$	-
1	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-			\$	-
2	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-			\$	-
3	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-			\$	-
4	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-			\$	-
5	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-			\$	-
ROW required for Temp. Construction Easement							\$	-			\$	-			\$	-			\$	-
1	Dense Urban	Acre					\$	-			\$	-			\$	-			\$	-
2	Urban	Acre					\$	-			\$	-			\$	-			\$	-
3	Dense Suburban	Acre					\$	-			\$	-			\$	-			\$	-
4	Suburban	Acre					\$	-			\$	-			\$	-			\$	-
5	Undeveloped	Acre					\$	-			\$	-			\$	-			\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities							\$	-			\$	-			\$	-			\$	-
6	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-			\$	-
7	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-			\$	-
8	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-			\$	-
9	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-			\$	-
10	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-			\$	-
Environmental Mitigation = 3% Line Costs							\$	3,146,820			\$	4,859,456			\$	13,164,412			\$	8,256,848
System Elements							\$	-			\$	-			\$	-			\$	-
1	Signaling (ATC)	Mile	\$	2,070,000		1.42	\$	2,940,341		1.42	\$	2,940,341		1.42	\$	2,940,341		1.42	\$	2,940,341
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000		1.42	\$	767,045		1.42	\$	767,045		1.42	\$	767,045		1.42	\$	767,045
3	Wayside Protection System	Mile	\$	108,000		1.42	\$	153,409		1.42	\$	153,409		1.42	\$	153,409		1.42	\$	153,409
Electrification Items							\$	-			\$	-			\$	-			\$	-
1	Traction Power supply	Mile	\$	1,170,000		1.42	\$	1,661,932		1.42	\$	1,661,932		1.42	\$	1,661,932		1.42	\$	1,661,932
2	Traction Power Distribution	Mile	\$	1,485,000		1.42	\$	2,109,375		1.42	\$	2,109,375		1.42	\$	2,109,375		1.42	\$	2,109,375
Subtotal						\$	115,672,913			\$	174,473,438			\$	459,610,252			\$	291,117,203	
Program Implementation Costs (per screening)						\$	29,496,593			\$	44,490,727			\$	117,200,614			\$	74,234,887	
Program Implementation Costs																				
Contingencies (per screening) (25%)						\$	28,918,228			\$	43,618,360			\$	114,902,563			\$	72,779,301	
Subtotal						\$	174,087,733			\$	262,582,524			\$	691,713,430			\$	438,131,390	
Subtotal (Rounded)						\$	174,000,000			\$	263,000,000			\$	692,000,000			\$	438,000,000	



COST ELEMENTS			UNIT	UNIT PRICE	Hybrid (2 tracks over 2 tracks)			
Subsection 6			Base: 2009 (3rd Quarter)		C			
					Start: 1865 + 00	End: 1940 + 00	1.42 Miles	
Subsection Details							Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 1865 + 00	End: 1940 + 00	1.42 Miles	
Double Track Trench (Mile)					Start: 1865 + 00	End: 1940 + 00	1.42 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total								
1 Double Track Section - At Grade	Mile	\$	2,100,224				0.00	\$ -
2 Double Track Section - On Structure	Mile	\$	4,700,160				0.00	\$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				1.42	\$ 6,676,364
4 Double Track Section - In Trench	Mile	\$	4,700,160				1.42	\$ 6,676,364
							0	\$ -
							0	\$ -
							0	\$ -
							0	\$ -
Four Track Section - Total								
Four-track Section - At Grade	Mile	\$	4,200,448				0.00	\$ -
Four-Track Section - On Structure	Mile	\$	9,400,320				0.00	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0.00	\$ -
Four-Track Section - In Trench	Mile	\$	9,400,320				0.00	\$ -
Single Track - Total								
5 Single Track Section - At Grade	Mile	\$	1,549,312				0	\$ -
6 Single Track Section - On structure	Mile	\$	2,350,080				0	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0	\$ -
8 Single Track Section - In Trench	Mile	\$	2,350,080				0	\$ -
9 Freight Double Track - At Grade	Mile	\$	2,839,552				0	\$ -
10 Freight Single Track - At Grade	Mile	\$	1,549,312				0	\$ -
Earthwork Items								
1 Site Preparation - Undeveloped	Acre	\$	9,216				30.13	\$ 277,686
2 Total Cut	CY	\$	6.00				1944444.44	\$ 11,666,667
3 Total Fill	CY	\$	6.00				0.00	\$ -
4 Borrow	CY	\$	13.00				0.00	\$ -
5 Spoil	CY	\$	13.00				1944444.44	\$ 25,277,778
6 Landscape erosion Control	Acre	\$	6,144				0.00	\$ -
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384				1.42	\$ 205,091
8 Special Drainage Facilities	5% Earthwork							\$ 1,871,361
Structures, Tunnels, Walls								
1 Standard Structure (2 tracks)	Mile	\$	34,972,672				0	\$ -
Standard Structure (4 tracks)	Mile	\$	52,459,008					
2 High Structure	Mile	\$	40,424,448					\$ -
3 Long Span Structure	Mile	\$	61,919,232					\$ -
4 Waterway Crossing - Primary	Mile	\$	85,342,208					\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				0.01	\$ 697,344
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264					\$ -
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312					\$ -
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896					\$ -
9 Double Track Drill & Blast	Mile	\$	146,887,680					\$ -
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000					\$ -
Double Track TBM (<6 Miles)	Mile	\$	106,637,312					
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896					
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952					\$ -
12 Crossovers	ea	\$	442,368					\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				0.00	\$ -
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224				0	\$ -
Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336					
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904					\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856					
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				1.42	\$ 16,830,545
17 Retaining Walls	Mile	\$	8,613,888				0	\$ -
18 Containment Walls	Mile	\$	5,907,456				0	\$ -
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080					\$ -
Four Track Drill & Blast	Mile	\$	293,775,360					\$ -
Four Track Mined (Soft Soil)	Mile	\$	158,400,000					\$ -
Four Track TBM (<6 Miles)	Mile	\$	213,274,624					
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792					
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00	\$ -
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114				1.42	\$ 466,649,310
Grade Separations								
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352					\$ -



COST ELEMENTS		UNIT	UNIT PRICE	Hybrid (2 tracks over 2 tracks)			
Subsection 6			Base: 2009 (3rd Quarter)	C			
				Start: 1865 + 00	End: 1940 + 00	1.42 Miles	
Subsection Details						Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 1865 + 00	End: 1940 + 00	1.42 Miles	
Double Track Trench (Mile)				Start: 1865 + 00	End: 1940 + 00	1.42 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -
7	Street Bridging HSR Trench	ea	\$ 1,398,784			1	\$ 1,398,784
8	Minor Crossing Closures	ea	\$ 87,040				\$ -
Building Items							
1	Intermediate Passenger Stations	Each	\$ -				\$ -
2	Terminal Passenger Stations	Each	\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -
1	Caltrain Passenger Station - In Trench	Each	\$15,000,000			1	\$ 15,000,000
3	Maintenance Facility	Each	\$ 123,921,884				\$ -
4	Parking - Structures	space	\$ -				\$ -
5	Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation							
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -
3	Single Track Removal	Mile	\$ 130,048				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
ROW (Not Included)							
ROW required for each segment							
1	Dense Urban	Acre	\$ 2,786,321				\$ -
2	Urban	Acre	\$ 1,371,510				\$ -
3	Dense Suburban	Acre	\$ 908,134				\$ -
4	Suburban	Acre	\$ 208,418				\$ -
5	Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement							
1	Dense Urban	Acre					\$ -
2	Urban	Acre					\$ -
3	Dense Suburban	Acre					\$ -
4	Suburban	Acre					\$ -
5	Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities							
6	Dense Urban	Acre	\$ 2,786,321				\$ -
7	Urban	Acre	\$ 1,371,510				\$ -
8	Dense Suburban	Acre	\$ 908,134				\$ -
9	Suburban	Acre	\$ 208,418				\$ -
10	Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs							\$ 16,596,819
System Elements							
1	Signaling (ATC)	Mile	\$ 2,070,000			1.42	\$ 2,940,341
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			1.42	\$ 767,045
3	Wayside Protection System	Mile	\$ 108,000			1.42	\$ 153,409
Electrification Items							
1	Traction Power supply	Mile	\$ 1,170,000			1.42	\$ 1,661,932
2	Traction Power Distribution	Mile	\$ 1,485,000			1.42	\$ 2,109,375
	Subtotal						\$ 577,456,214
Program Implementation Costs (per screening)							\$ 147,251,335
Program Implementation Costs							
Contingencies (per screening) (25%)							\$ 144,364,053
Subtotal							\$ 869,071,602
Subtotal (Rounded)							\$ 869,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (2 tracks)				Elevated Viaduct (4 tracks)				At-Grade (2 tracks)				At-Grade (4 tracks)					
Subsection 6			Base: 2009 (3rd Quarter)	D				D				D				D						
				Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles				
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)					Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles			
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Section - Total																						
1	Double Track Section - At Grade	Mile	\$	2,100,224			0	\$	-			0	\$	-	0.57	\$	1,193,309			0.00	\$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.57	\$	2,670,545			0	\$	-	0.00	\$	-			0.00	\$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				\$	-			0	\$	-	0.00	\$	-			0.00	\$	-
4	Double Track Section - In Trench	Mile	\$	4,700,160			0	\$	-			0	\$	-	0.00	\$	-			0.00	\$	-
Four Track Section - Total																						
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-			0.00	\$	-	0.00	\$	-			0.57	\$	2,386,618
	Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$	-			0.57	\$	5,341,091			0	\$	-	0	\$	-
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				\$	-			0	\$	-			0	\$	-	0	\$	-
	Four-Track Section - In Trench	Mile	\$	9,400,320			0	\$	-			0	\$	-			0	\$	-	0	\$	-
Single Track - Total																						
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-	0	\$	-			0	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080				\$	-			0	\$	-	0	\$	-			0	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-			0	\$	-	0	\$	-			0	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			0	\$	-	0	\$	-			0	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-			0	\$	-	0	\$	-			0	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-	0	\$	-			0	\$	-
Earthwork Items																						
1	Site Preparation - Undeveloped	Acre	\$	9,216			4.48	\$	41,256			7.58	\$	69,818			0.00	\$	-	0.00	\$	-
2	Total Cut	CY	\$	6.00			0.00	\$	-			0.00	\$	-			0.00	\$	-	0.00	\$	-
3	Total Fill	CY	\$	6.00			0.00	\$	-			0.00	\$	-			0.00	\$	-	0.00	\$	-
4	Borrow	CY	\$	13.00			0.00	\$	-			0.00	\$	-			0.00	\$	-	0.00	\$	-
5	Spoil	CY	\$	13.00			0.00	\$	-			0.00	\$	-			0.00	\$	-	0.00	\$	-
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$	-			0.00	\$	-			0.00	\$	-	0.00	\$	-
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-			0.00	\$	-	0.57	\$	82,036			0.57	\$	82,036
8	Special Drainage Facilities	5% Earthwork						\$	2,063				\$	3,491							\$	4,102
Structures, Tunnels, Walls																						
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.57	\$	19,870,836			0.00	\$	-	0.00	\$	-			0.00	\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00					0.57	\$	29,806,255			0.00		0.00			
2	High Structure	Mile	\$	40,424,448				\$	-				\$	-						\$	-	
3	Long Span Structure	Mile	\$	61,919,232				\$	-				\$	-						\$	-	
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-				\$	-						\$	-	
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$	-				\$	-	0.01	\$	871,680			0.01	\$	871,680
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-				\$	-						\$	-	
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-						\$	-	
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-				\$	-						\$	-	
9	Double Track Drill & Blast	Mile	\$	146,887,680			0	\$	-			0	\$	-						0	\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-				\$	-						\$	-	
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312									\$	-						\$	-	
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896									\$	-						\$	-	
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-				\$	-						\$	-	
12	Crossovers	ea	\$	442,368				\$	-				\$	-						\$	-	
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0	\$	-			0	\$	-						0	\$	-
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0.00 Miles	\$	-			0.00 Miles	\$	-			0.00 Miles	\$	-	0.00 Miles	\$	-
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336			0.00 Miles					0.00 Miles					0.00 Miles			0.00 Miles		
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-				\$	-							\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																		
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0	\$	-			0	\$	-			0	\$	-	0	\$	-
17	Retaining Walls	Mile	\$	8,613,888			0	\$	-			0	\$	-			0	\$	-	0	\$	-
18	Containment Walls	Mile	\$	5,907,456				\$	-				\$	-						\$	-	
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-				\$	-						\$	-	
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-				\$	-						\$	-	
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-				\$	-						\$	-	
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624									\$	-						\$	-	
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792									\$	-						\$	-	
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			0.00	\$	-			0.00	\$	-	0.00	\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																		
Grade Separations																						
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-				\$	-							\$	-
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$	-				\$	-	2	\$	39,853,056			2	\$	39,853,056
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	-				\$	-							\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-				\$	-							\$	-
4	Roadway Crossing HSR - 4 Lane																					



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (2 tracks)				Elevated Viaduct (4 tracks)				At-Grade (2 tracks)				At-Grade (4 tracks)				
Subsection 6			Base: 2009 (3rd Quarter)	D				D				D				D					
				Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles			
Subsection Details					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-			\$	-			\$	-			\$	-
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$	-			\$	-			\$	-			\$	-
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-			\$	-			\$	-			\$	-
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$	-			\$	-			\$	-			\$	-
8	Minor Crossing Closures	ea	\$	87,040				\$	-			\$	-			\$	-			\$	-
Building Items																					
1	Intermediate Passenger Stations	Each	\$	-				\$	-			\$	-			\$	-			\$	-
2	Terminal Passenger Stations	Each	\$	-				\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-			\$	-			\$	-			\$	-
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-			\$	-			\$	-			\$	-
3	Maintenance Facility	Each	\$	123,921,884				\$	-			\$	-			\$	-			\$	-
4	Parking - Structures	space	\$	-				\$	-			\$	-			\$	-			\$	-
5	Parking - At Grade	space	\$	-				\$	-			\$	-			\$	-			\$	-
Rail & Utility Relocation																					
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-			\$	-			\$	-			\$	-
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-			\$	-			\$	-			\$	-
3	Single Track Removal	Mile	\$	130,048				\$	-			\$	-			\$	-			\$	-
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-			\$	-			\$	-			\$	-
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-			\$	-			\$	-			\$	-
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-			\$	-			\$	-			\$	-
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-			\$	-			\$	-			\$	-
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-			\$	-			\$	-			\$	-
ROW (Not Included)																					
ROW required for each segment																					
1	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-			\$	-			\$	-
2	Urban	Acre	\$	1,371,510				\$	-			\$	-			\$	-			\$	-
3	Dense Suburban	Acre	\$	908,134				\$	-			\$	-			\$	-			\$	-
4	Suburban	Acre	\$	208,418				\$	-			\$	-			\$	-			\$	-
5	Undeveloped	Acre	\$	3,642				\$	-			\$	-			\$	-			\$	-
ROW required for Temp. Construction Easement																					
1	Dense Urban	Acre						\$	-			\$	-			\$	-			\$	-
2	Urban	Acre						\$	-			\$	-			\$	-			\$	-
3	Dense Suburban	Acre						\$	-			\$	-			\$	-			\$	-
4	Suburban	Acre						\$	-			\$	-			\$	-			\$	-
5	Undeveloped	Acre						\$	-			\$	-			\$	-			\$	-
Right-of-Way Required for Stations, Maintenance & Parking Facilities																					
6	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-			\$	-			\$	-
7	Urban	Acre	\$	1,371,510				\$	-			\$	-			\$	-			\$	-
8	Dense Suburban	Acre	\$	908,134				\$	-			\$	-			\$	-			\$	-
9	Suburban	Acre	\$	208,418				\$	-			\$	-			\$	-			\$	-
10	Undeveloped	Acre	\$	3,642				\$	-			\$	-			\$	-			\$	-
	Environmental Mitigation = 3% Line Costs							\$	677,541			\$	1,056,620			\$	1,260,125			\$	1,295,925
System Elements																					
1	Signaling (ATC)	Mile	\$	2,070,000			0.57	\$	1,176,136			0.57	\$	1,176,136			0.57	\$	1,176,136		
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.57	\$	306,818			0.57	\$	306,818			0.57	\$	306,818		
3	Wayside Protection System	Mile	\$	108,000			0.57	\$	61,364			0.57	\$	61,364			0.57	\$	61,364		
Electrification Items																					
1	Traction Power supply	Mile	\$	1,170,000			0.57	\$	664,773			0.57	\$	664,773			0.57	\$	664,773		
2	Traction Power Distribution	Mile	\$	1,485,000			0.57	\$	843,750			0.57	\$	843,750			0.57	\$	843,750		
Subtotal							\$	26,315,083			\$	39,330,115			\$	46,317,150			\$	47,546,258	
Program Implementation Costs (per screening)							\$	6,710,346			\$	10,029,179			\$	11,810,873			\$	12,124,296	
Program Implementation Costs																					
Contingencies (per screening) (25%)							\$	6,578,771			\$	9,832,529			\$	11,579,287			\$	11,886,565	
Subtotal							\$	39,604,200			\$	59,191,823			\$	69,707,310			\$	71,557,118	
Subtotal (Rounded)							\$	40,000,000			\$	59,000,000			\$	70,000,000			\$	72,000,000	



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (HST only)			
Subsection 6				Base: 2009 (3rd Quarter)	D				D				D				D			
					Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles	
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		
Double Track Trench (Mile)				Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Section - Total																				
1	Double Track Section - At Grade	Mile	\$	2,100,224		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
2	Double Track Section - On Structure	Mile	\$	4,700,160		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.57	\$ 2,670,545	
4	Double Track Section - In Trench	Mile	\$	4,700,160		0.57	\$ 2,670,545			0.00	\$ -			0.00	\$ -			0.00	\$ -	
Four Track Section - Total																				
	Four-track Section - At Grade	Mile	\$	4,200,448		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
	Four-Track Section - On Structure	Mile	\$	9,400,320		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320		0.00	\$ -			0.00	\$ -			0.57	\$ 5,341,091			0.00	\$ -	
	Four-Track Section - In Trench	Mile	\$	9,400,320		0.00	\$ -			0.57	\$ 5,341,091			0.00	\$ -			0.00	\$ -	
Single Track - Total																				
5	Single Track Section - At Grade	Mile	\$	1,549,312		0	\$ -			0	\$ -			0	\$ -			0	\$ -	
6	Single Track Section - On structure	Mile	\$	2,350,080		0	\$ -			0	\$ -			0	\$ -			0	\$ -	
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080		0	\$ -			0	\$ -			0	\$ -			0	\$ -	
8	Single Track Section - In Trench	Mile	\$	2,350,080		0	\$ -			0	\$ -			0	\$ -			0	\$ -	
9	Freight Double Track - At Grade	Mile	\$	2,839,552		0	\$ -			0	\$ -			0	\$ -			0	\$ -	
10	Freight Single Track - At Grade	Mile	\$	1,549,312		0	\$ -			0	\$ -			0	\$ -			0	\$ -	
Earthwork Items																				
1	Site Preparation - Undeveloped	Acre	\$	9,216		0.00	\$ -			7.58	\$ 69,818			7.58	\$ 69,818			0.00	\$ -	
2	Total Cut	CY	\$	6.00		0.00	\$ -			488888.89	\$ 2,933,333			488888.89	\$ 2,933,333			0.00	\$ -	
3	Total Fill	CY	\$	6.00		0.00	\$ -			0.00	\$ -			244444.44	\$ 1,466,667			0.00	\$ -	
4	Borrow	CY	\$	13.00		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
5	Spoil	CY	\$	13.00		0.00	\$ -			488888.89	\$ 6,355,556			244444.44	\$ 3,177,778			0.00	\$ -	
6	Landscape erosion Control	Acre	\$	6,144		0.00	\$ -			7.58	\$ 46,545			0.00	\$ -			0.00	\$ -	
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384		0.00	\$ -			0.57	\$ 82,036			0.00	\$ -			0.00	\$ -	
8	Special Drainage Facilities	5% Earthwork					\$ -				\$ 474,364				\$ 382,380				\$ -	
Structures, Tunnels, Walls																				
1	Standard Structure (2 tracks)	Mile	\$	34,972,672		0.00 Miles	\$ -			0.00 Miles	\$ -			0.00 Miles	\$ -			0.00 Miles	\$ -	
	Standard Structure (4 tracks)	Mile	\$	52,459,008		0.00 Miles				0.00 Miles				0.00 Miles				0.00 Miles		
2	High Structure	Mile	\$	40,424,448			\$ -				\$ -				\$ -				\$ -	
3	Long Span Structure	Mile	\$	61,919,232			\$ -				\$ -				\$ -				\$ -	
4	Waterway Crossing - Primary	Mile	\$	85,342,208			\$ -				\$ -				\$ -				\$ -	
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408		0.01	\$ 697,344			0.01	\$ 697,344			0.01	\$ 697,344			0.01	\$ 697,344	
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$ -				\$ -				\$ -				\$ -	
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			\$ -				\$ -				\$ -				\$ -	
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			\$ -				\$ -				\$ -				\$ -	
9	Double Track Drill & Blast	Mile	\$	146,887,680		0	\$ -			0	\$ -			0	\$ -			0.00	\$ -	
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000			\$ -				\$ -				\$ -			0.00	\$ -	
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312		0												0.00	\$ -	
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896		0.00 Miles												0.57	\$ 100,409,600	
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$ -				\$ -				\$ -			0.00	\$ -	
12	Crossovers	ea	\$	442,368			\$ -				\$ -				\$ -				\$ -	
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080		0	\$ -			0	\$ -			0	\$ -			0.00	\$ -	
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224		0.57	\$ 32,684,218			0.00	\$ -			0.00	\$ -			0.00	\$ -	
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336		0.00	\$ -			0.57	\$ 49,026,327			0.00				0.00		
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904			\$ -				\$ -				\$ -				\$ -	
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704		0.00	\$ -			0.00	\$ -			0.57	\$ 6,732,218			0.57	\$ 6,732,218	
17	Retaining Walls	Mile	\$	8,613,888		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
18	Containment Walls	Mile	\$	5,907,456		0.00	\$ -			0.00	\$ -				\$ -				\$ -	
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080			\$ -				\$ -				\$ -				\$ -	
	Four Track Drill & Blast	Mile	\$	293,775,360			\$ -				\$ -				\$ -				\$ -	
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000			\$ -				\$ -				\$ -			0.00	\$ -	
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624														0.00	\$ -	
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792															\$ -	
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160		0.00	\$ -			0.00	\$ -			0.57	\$ 149,143,273			0.00	\$ -	
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																
Grade Separations																				
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352			\$ -				\$ -				\$ -				\$ -	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			\$ -				\$ -				\$ -				\$ -	
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			\$ -				\$ -				\$ -				\$ -	
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$ -				\$ -				\$ -				\$ -	
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			\$ -				\$ -				\$ -				\$ -	



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (HST only)				
Subsection 6			Base: 2009 (3rd Quarter)	D				D				D				D					
				Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles			
Subsection Details						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles			
Double Track Trench (Mile)				Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1940 + 00	End: 1970 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			\$	-			\$	-			\$	-			\$	-	
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816			\$	-			\$	-			\$	-			\$	-	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328			\$	-			\$	-			\$	-			\$	-	
7	Street Bridging HSR Trench	ea	\$	1,398,784			2	\$	2,797,568			2	\$	2,797,568			\$	-		\$	-
8	Minor Crossing Closures	ea	\$	87,040				\$	-			\$	-			\$	-			\$	-
Building Items																					
1	Intermediate Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-			\$	-	
2	Terminal Passenger Stations	Each	\$	-			\$	-			\$	-			\$	-			\$	-	
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000			\$	-			\$	-			\$	-			\$	-	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000			\$	-			\$	-			\$	-			\$	-	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000			\$	-			\$	-			\$	-			\$	-	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000			\$	-			\$	-			\$	-			\$	-	
3	Maintenance Facility	Each	\$	123,921,884			\$	-			\$	-			\$	-			\$	-	
4	Parking - Structures	space	\$	-			\$	-			\$	-			\$	-			\$	-	
5	Parking - At Grade	space	\$	-			\$	-			\$	-			\$	-			\$	-	
Rail & Utility Relocation																					
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896			\$	-			\$	-			\$	-			\$	-	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896			\$	-			\$	-			\$	-			\$	-	
3	Single Track Removal	Mile	\$	130,048			\$	-			\$	-			\$	-			\$	-	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288			\$	-			\$	-			\$	-			\$	-	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416			\$	-			\$	-			\$	-			\$	-	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168			\$	-			\$	-			\$	-			\$	-	
7	Major Utility Relocations - Suburban	Mile	\$	464,896			\$	-			\$	-			\$	-			\$	-	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720			\$	-			\$	-			\$	-			\$	-	
ROW (Not Included)																					
ROW required for each segment																					
1	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-			\$	-	
2	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-			\$	-	
3	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-			\$	-	
4	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-			\$	-	
5	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-			\$	-	
ROW required for Temp. Construction Easement																					
1	Dense Urban	Acre					\$	-			\$	-			\$	-			\$	-	
2	Urban	Acre					\$	-			\$	-			\$	-			\$	-	
3	Dense Suburban	Acre					\$	-			\$	-			\$	-			\$	-	
4	Suburban	Acre					\$	-			\$	-			\$	-			\$	-	
5	Undeveloped	Acre					\$	-			\$	-			\$	-			\$	-	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																					
6	Dense Urban	Acre	\$	2,786,321			\$	-			\$	-			\$	-			\$	-	
7	Urban	Acre	\$	1,371,510			\$	-			\$	-			\$	-			\$	-	
8	Dense Suburban	Acre	\$	908,134			\$	-			\$	-			\$	-			\$	-	
9	Suburban	Acre	\$	208,418			\$	-			\$	-			\$	-			\$	-	
10	Undeveloped	Acre	\$	3,642			\$	-			\$	-			\$	-			\$	-	
	Environmental Mitigation = 3% Line Costs						\$	1,165,490			\$	2,034,720			\$	5,098,317			\$	3,315,291	
System Elements																					
1	Signaling (ATC)	Mile	\$	2,070,000			0.57	\$	1,176,136			0.57	\$	1,176,136			0.57	\$	1,176,136		
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.57	\$	306,818			0.57	\$	306,818			0.57	\$	306,818		
3	Wayside Protection System	Mile	\$	108,000			0.57	\$	61,364			0.57	\$	61,364			0.57	\$	61,364		
Electrification Items																					
1	Traction Power supply	Mile	\$	1,170,000			0.57	\$	664,773			0.57	\$	664,773			0.57	\$	664,773		
2	Traction Power Distribution	Mile	\$	1,485,000			0.57	\$	843,750			0.57	\$	843,750			0.57	\$	843,750		
Subtotal							\$	43,068,007			\$	72,911,544			\$	178,095,060			\$	116,877,840	
Program Implementation Costs (per screening)							\$	10,982,342			\$	18,592,444			\$	45,414,240			\$	29,803,849	
Program Implementation Costs																					
Contingencies (per screening) (25%)							\$	10,767,002			\$	18,227,886			\$	44,523,765			\$	29,219,460	
Subtotal							\$	64,817,350			\$	109,731,874			\$	268,033,065			\$	175,901,149	
Subtotal (Rounded)							\$	65,000,000			\$	110,000,000			\$	268,000,000			\$	176,000,000	



COST ELEMENTS		UNIT	UNIT PRICE	Hybrid (2 tracks over 2 tracks)			
Subsection 6			Base: 2009 (3rd Quarter)	D			
				Start: 1940 + 00	End: 1970 + 00	0.57 Miles	
Subsection Details						Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 1940 + 00	End: 1970 + 00	0.57 Miles	
Double Track Trench (Mile)				Start: 1940 + 00	End: 1970 + 00	0.57 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total							
1 Double Track Section - At Grade	Mile	\$	2,100,224			0.00 \$	-
2 Double Track Section - On Structure	Mile	\$	4,700,160			0.00 \$	-
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.57 \$	2,670,545
4 Double Track Section - In Trench	Mile	\$	4,700,160			0.57 \$	2,670,545
						0 \$	-
						0 \$	-
						0 \$	-
						0 \$	-
Four Track Section - Total							
Four-track Section - At Grade	Mile	\$	4,200,448			0.00 \$	-
Four-Track Section - On Structure	Mile	\$	9,400,320			0.00 \$	-
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00 \$	-
Four-Track Section - In Trench	Mile	\$	9,400,320			0.00 \$	-
Single Track - Total							
5 Single Track Section - At Grade	Mile	\$	1,549,312			0 \$	-
6 Single Track Section - On structure	Mile	\$	2,350,080			0 \$	-
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0 \$	-
8 Single Track Section - In Trench	Mile	\$	2,350,080			0 \$	-
9 Freight Double Track - At Grade	Mile	\$	2,839,552			0 \$	-
10 Freight Single Track - At Grade	Mile	\$	1,549,312			0 \$	-
Earthwork Items							
1 Site Preparation - Undeveloped	Acre	\$	9,216			12.05 \$	111,074
2 Total Cut	CY	\$	6.00			777777.78 \$	4,666,667
3 Total Fill	CY	\$	6.00			0.00 \$	-
4 Borrow	CY	\$	13.00			0.00 \$	-
5 Spoil	CY	\$	13.00			777777.78 \$	10,111,111
6 Landscape erosion Control	Acre	\$	6,144			0.00 \$	-
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.57 \$	82,036
8 Special Drainage Facilities	5% Earthwork					\$	748,544
Structures, Tunnels, Walls							
1 Standard Structure (2 tracks)	Mile	\$	34,972,672			0 \$	-
Standard Structure (4 tracks)	Mile	\$	52,459,008				
2 High Structure	Mile	\$	40,424,448			\$	-
3 Long Span Structure	Mile	\$	61,919,232			\$	-
4 Waterway Crossing - Primary	Mile	\$	85,342,208			\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.01 \$	697,344
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$	-
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			\$	-
9 Double Track Drill & Blast	Mile	\$	146,887,680			\$	-
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000			\$	-
Double Track TBM (<6 Miles)	Mile	\$	106,637,312				
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896				
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$	-
12 Crossovers	ea	\$	442,368			\$	-
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00 \$	-
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0 \$	-
Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336				
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904			\$	-
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856				
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0.57 \$	6,732,218
17 Retaining Walls	Mile	\$	8,613,888			0 \$	-
18 Containment Walls	Mile	\$	5,907,456			0 \$	-
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080			\$	-
Four Track Drill & Blast	Mile	\$	293,775,360			\$	-
Four Track Mined (Soft Soil)	Mile	\$	158,400,000			\$	-
Four Track TBM (<6 Miles)	Mile	\$	213,274,624				
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792				
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00 \$	-
Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114			0.57 \$	186,659,724
Grade Separations							
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352			\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			\$	-
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			\$	-
Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	-
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			\$	-



COST ELEMENTS		UNIT	UNIT PRICE	Hybrid (2 tracks over 2 tracks)			
Subsection 6		Base: 2009 (3rd Quarter)		D			
				Start: 1940 + 00	End: 1970 + 00	0.57 Miles	
Subsection Details						Quant.	Cost
Double Track At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)			Start: 1940 + 00	End: 1970 + 00	0.57 Miles		
Double Track Trench (Mile)			Start: 1940 + 00	End: 1970 + 00	0.57 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)			Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)			Start: 0 + 00	End: 0 + 00	0.00 Miles		
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -
7	Street Bridging HSR Trench	ea	\$ 1,398,784			2	\$ 2,797,568
8	Minor Crossing Closures	ea	\$ 87,040				\$ -
Building Items							
1	Intermediate Passenger Stations	Each	\$ -				\$ -
2	Terminal Passenger Stations	Each	\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -
3	Maintenance Facility	Each	\$ 123,921,884				\$ -
4	Parking - Structures	space	\$ -				\$ -
5	Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation							
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -
3	Single Track Removal	Mile	\$ 130,048				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
ROW (Not Included)							
ROW required for each segment							
1	Dense Urban	Acre	\$ 2,786,321				\$ -
2	Urban	Acre	\$ 1,371,510				\$ -
3	Dense Suburban	Acre	\$ 908,134				\$ -
4	Suburban	Acre	\$ 208,418				\$ -
5	Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement							
1	Dense Urban	Acre					\$ -
2	Urban	Acre					\$ -
3	Dense Suburban	Acre					\$ -
4	Suburban	Acre					\$ -
5	Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities							
6	Dense Urban	Acre	\$ 2,786,321				\$ -
7	Urban	Acre	\$ 1,371,510				\$ -
8	Dense Suburban	Acre	\$ 908,134				\$ -
9	Suburban	Acre	\$ 208,418				\$ -
10	Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs							\$ 6,538,421
System Elements							
1	Signaling (ATC)	Mile	\$ 2,070,000			0.57	\$ 1,176,136
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.57	\$ 306,818
3	Wayside Protection System	Mile	\$ 108,000			0.57	\$ 61,364
Electrification Items							
1	Traction Power supply	Mile	\$ 1,170,000			0.57	\$ 664,773
2	Traction Power Distribution	Mile	\$ 1,485,000			0.57	\$ 843,750
	Subtotal						\$ 227,538,640
Program Implementation Costs (per screening)							\$ 58,022,353
Program Implementation Costs							
Contingencies (per screening) (25%)							\$ 56,884,660
Subtotal							\$ 342,445,653
Subtotal (Rounded)							\$ 342,000,000



Subsection 7	7A & 7B (2.9 miles)						7C & 7D1 & 7D2 (2.8 miles)					
	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Hybrid	Aerial Viaduct	At Grade	Open Trench	Covered Trench/Tunnel	Deep Tunnel (HST Only)	Hybrid
Capital Cost (\$2009 in Millions) does not include ROW	\$462	\$242	\$583 (4 tracks) \$465 (2 tracks)	\$1,433	\$737 (2 tracks)	\$1,202-1,789	\$449 (4 tracks) \$256 (2 tracks)	\$345	\$510 (4 tracks) \$315 (2 tracks)	\$1,323	\$785 (2 tracks)	\$1,100-1,652
Acquisition Cost of Permanent ROW	Medium	Highest	Medium	Lowest	Lowest	Lowest	Medium	Highest	Medium	Lowest	Lowest	Lowest
Notes:	1. Caltrain San Antonio and Mountain View stations. 2. Potential HST Mountain View station (costs not included). 3. Convert Shoreline Blvd to an underpass. 4. Relocate VTA LRT to be underground with the Evelyn Station underground.	1. Caltrain San Antonio and Mountain View stations. 2. Potential HST Mountain View station (costs not included). 3. Grade separation at Rengstorff Ave and Castro St. 4. Relocate VTA LRT to be underground with the Mountain View and Evelyn Stations underground.	<b>4 tracks</b> - 1. Caltrain San Antonio and Mountain View stations. 2. Potential HST Mountain View station (costs not included). 3. VTA LRT remains at grade. <b>2 tracks</b> - 1. Caltrain San Antonio and Mountain View stations. 2. Potential HST Mountain View station (costs not included). 2. Potential HST Mountain View station (costs not included). 3. <i>Must be combined with 2 track deep tunnel option for a hybrid option.</i>	1. Caltrain San Antonio and Mountain View stations. 2. Potential HST Mountain View station (costs not included). 3. VTA LRT remains at grade.	1. No Potential HST Mountain View Station. 2. <i>Must be combined with 2 track open trench option for a hybrid option.</i> 3. VTA LRT remains at grade.	1. Caltrain San Antonio and Mountain View stations. 2. No Potential HST Mountain View station (costs not included). 3. VTA LRT remains at grade.	1. Caltrain Sunnyvale station. 2. Aerial only in the vicinity of Mary Ave.	1. Caltrain Sunnyvale station. 2. Grade separations at Mary Ave and Sunnyvale Ave.	1. Caltrain Sunnyvale station. 2. <i>Must be combined with 2 track deep tunnel option for a hybrid option.</i>	1. Caltrain Sunnyvale station.	1. <i>Must be combined with 2 track open trench option for a hybrid option.</i>	1. Caltrain Sunnyvale station.



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (4 tracks)				At-Grade (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)				
Subsection 7				Base: 2009 (3rd Quarter)	A				A				A				A				
					Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles		
Subsection Dedtails						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles							
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles							
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles							
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00		0.00 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Elevated (Mile)				Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles							
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles							
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles							
				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles			
Double Track Section - Total																					
1 Double Track Section - At Grade				Mile	\$	2,100,224			0.00	\$	-			0.00	\$	-			0.00	\$	-
2 Double Track Section - On Structure				Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-
3 Double Track Section - In Tunnel or Subway				Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-
4 Double Track Section - In Trench				Mile	\$	4,700,160			0.00	\$	-			1.04	\$	4,896,000			0.00	\$	-
Four Track Section - Total																					
Four-track Section - At Grade				Mile	\$	4,200,448			0.00	\$	-			1.04	\$	4,375,467			0.00	\$	-
Four-Track Section - On Structure				Mile	\$	9,400,320			1.04	\$	9,792,000			0	\$	-			0.00	\$	-
Four-Track Section - In Tunnel or Subway				Mile	\$	9,400,320			0.00	\$	-			0	\$	-			0.00	\$	-
Four-Track Section - In Trench				Mile	\$	9,400,320			0.00	\$	-			0	\$	-			1.04	\$	9,792,000
Single Track - Total																					
5 Single Track Section - At Grade				Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-
6 Single Track Section - On structure				Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-
7 Single Track Section - In Tunnel or Subway				Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-
8 Single Track Section - In Trench				Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-
9 Freight Double Track - At Grade				Mile	\$	2,839,552			0	\$	-			0	\$	-			0	\$	-
10 Freight Single Track - At Grade				Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-
Earthwork Items																					
1 Site Preparation - Undeveloped				Acre	\$	9,216			13.89	\$	128,000			0.00	\$	-			8.21	\$	75,636
2 Total Cut				CY	\$	6.45			0	\$	-			0.00	\$	-			0.00	\$	-
3 Total Fill				CY	\$	6.29			0	\$	-			0.00	\$	-			0.00	\$	-
4 Borrow				CY	\$	12.58			0.00	\$	-			0.00	\$	-			0.00	\$	-
5 Spoil				CY	\$	12.58			0.00	\$	-			0.00	\$	-			0.00	\$	-
6 Landscape erosion Control				Acre	\$	6,144			0.00	\$	-			0.00	\$	-			0.00	\$	-
7 Security Fencing (Both sides of ROW)				Mile	\$	144,384			0.00	\$	-			1.04	\$	150,400			0.00	\$	-
8 Special Drainage Facilities				5% Earthwork						\$	6,400				\$	7,520				\$	3,782
Structures, Tunnels, Walls																					
1 Standard Structure (2 tracks)				Mile	\$	34,972,672			0.00	\$	-			0.00 Miles	\$	-			0.00	\$	-
Standard Structure (4 tracks)				Mile	\$	52,459,008			1.04	\$	54,644,800			0.00 Miles					0.00		
2 High Structure				Mile	\$	40,424,448				\$	-				\$	-				\$	-
3 Long Span Structure				Mile	\$	61,919,232				\$	-				\$	-				\$	-
4 Waterway Crossing - Primary				Mile	\$	85,342,208				\$	-				\$	-				\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)				Mile	\$	92,049,408			0.02	\$	1,743,360			0.01	\$	871,680				\$	-
6 Twin Single Track Drill&Blast (<6 Miles)				Mile	\$	142,731,264				\$	-				\$	-				\$	-
7 Twin Single Track TBM (<6 Miles)				Mile	\$	106,637,312				\$	-				\$	-				\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)				Mile	\$	176,720,896				\$	-				\$	-				\$	-
9 Double Track Drill & Blast				Mile	\$	146,887,680			0.00	\$	-			0	\$	-			0.00	\$	-
10 Double Track Mined (Soft Soil)				Mile	\$	792,000,000				\$	-				\$	-				\$	-
Double Track TBM (<6 Miles)				Mile	\$	106,637,312				\$	-				\$	-				\$	-
Double Track TBM w/3rd Tube (>6 Miles)				Mile	\$	176,720,896				\$	-				\$	-				\$	-
11 Seismic Chamber (Drill & Blast/Mined)				ea	\$	126,205,952				\$	-				\$	-				\$	-
12 Crossovers				ea	\$	442,368				\$	-				\$	-				\$	-
13 Cut & Cover Double Track Tunnel				Mile	\$	131,246,080			0.00	\$	-			0	\$	-			0.00	\$	-
14 Trench Long (2 tracks) (1000 ft+)				Mile	\$	57,524,224			0.00	\$	-			0.00 Miles	\$	-			1.04	\$	59,921,067
Trench Long (4 tracks) (1000 ft+)				Mile	\$	86,286,336			0.00					0.00 Miles					0.00	\$	-
15 Trench Short (2 tracks) (<1000 ft)				Mile	\$	78,843,904				\$	-				\$	-				\$	-
Trench Short (4 tracks) (<1000 ft)				Mile	\$	118,265,856															
16 Mechanical & Electrical for Tunnels				Mile	\$	11,848,704			0.00	\$	-			0	\$	-			0.00	\$	-
17 Retaining Walls				Mile	\$	8,613,888			0.00	\$	-			0	\$	-			0.00	\$	-
18 Containment Walls				Mile	\$	5,907,456				\$	-				\$	-			0.00	\$	-
19 Single Track Cut and Cover Subway				Mile	\$	131,246,080				\$	-				\$	-				\$	-
Four Track Drill & Blast				Mile	\$	293,775,360				\$	-				\$	-				\$	-
Four Track Mined (Soft Soil)				Mile	\$	1,584,000,000				\$	-				\$	-				\$	-
Four Track TBM (<6 Miles)				Mile	\$	213,274,624				\$	-				\$	-				\$	-
Four Track TBM w/3rd Tube (>6 Miles)				Mile	\$	353,441,792				\$	-				\$	-				\$	-
Four Track Cut & Cover Tunnel				Mile	\$	262,492,160			0.00	\$	-			0.00	\$	-			0.00	\$	-
Double Deck with Double Track Cut and Cover Box				Mile	\$	328,521,114															
Grade Separations																					
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)				ea	\$	13,284,352				\$	-				\$	-				\$	-
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)				ea	\$																



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (4 tracks)			At-Grade (4 tracks)			Open Trench (2 tracks)				Open Trench (4 tracks)													
Subsection 7				Base: 2009 (3rd Quarter)	A			A			A				A													
					Start: 1970 + 00	End: 2025 + 00	1.04 Miles	Start: 1970 + 00	End: 2025 + 00	1.04 Miles	Start: 1970 + 00	End: 2025 + 00	1.04 Miles	Start: 1970 + 00	End: 2025 + 00	1.04 Miles												
Subsection Dedtails						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost									
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles									
Double Track Elevated (Mile)					Start: 0 + 00	0.00 Miles	Start: 0 + 00			0.00 Miles	Start: 0 + 00		0.00 Miles															
Double Track Tunnel (Mile)					Start: 0 + 00	0.00 Miles	Start: 0 + 00			0.00 Miles	Start: 0 + 00		0.00 Miles															
Double Track Trench (Mile)					Start: 0 + 00	0.00 Miles	Start: 0 + 00			0.00 Miles	Start: 1970 + 00		End: 2025 + 00	1.04 Miles														
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles									
Four Track Elevated (Mile)					Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles													
Four Track Tunnel (Mile)					Start: 0 + 00	0.00 Miles	Start: 0 + 00			0.00 Miles	Start: 0 + 00		End: 0 + 00	0.00 Miles														
Four Track Trench (Mile)					Start: 0 + 00	0.00 Miles	Start: 0 + 00			0.00 Miles	Start: 0 + 00		End: 0 + 00	0.00 Miles														
1 Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)				ea	\$	2,850,816					\$	-					\$	-										
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)				ea	\$	3,171,328					\$	-					\$	-										
7 Street Bridging HSR Trench				ea	\$	1,398,784					\$	-			3	\$	4,196,352		3	\$	4,196,352							
8 Minor Crossing Closures				ea	\$	87,040					\$	-					\$	-										
Building Items																												
1 Intermediate Passenger Stations				Each	\$	-					\$	-					\$	-										
2 Terminal Passenger Stations				Each	\$	-					\$	-					\$	-										
Caltrain Passenger Station - At-Grade				Each	\$	15,000,000				1	\$	15,000,000					\$	-										
Caltrain Passenger Station - On Structure				Each	\$	15,000,000		1	\$	15,000,000							\$	-										
Caltrain Passenger Station - In Tunnel or Subway				Each	\$	15,000,000					\$	-					\$	-										
Caltrain Passenger Station - In Trench				Each	\$	15,000,000					\$	-			1	\$	15,000,000		1	\$	15,000,000							
3 Maintenance Facility				Each	\$	-					\$	-					\$	-										
4 Parking - Structures				space	\$	-					\$	-					\$	-										
5 Parking - At Grade				space	\$	-					\$	-					\$	-										
Rail & Utility Relocation																												
1 Single Track Relocation (Temporary)				Mile	\$	2,000,896					\$	-					\$	-										
2 Single Track Relocation (Permanent)				Mile	\$	2,000,896					\$	-					\$	-										
Double Track Relocation (Permanent) - VTA LRT Cut and Cover Tunnel				Mile	\$	131,246,080																						
3 Single Track Removal				Mile	\$	130,048					\$	-					\$	-										
4 Major Utility Relocations - Dense Urban				Mile	\$	1,548,288					\$	-					\$	-										
5 Major Utility Relocations - Urban				Mile	\$	1,084,416					\$	-					\$	-										
6 Major Utility Relocations - Dense Suburban				Mile	\$	775,168					\$	-					\$	-										
7 Major Utility Relocations - Suburban				Mile	\$	464,896					\$	-					\$	-										
8 Major Utility Relocations - Undeveloped				Mile	\$	30,720					\$	-					\$	-										
ROW (Not Included)																												
ROW required for each segment																												
1 Dense Urban				Acre	\$	2,786,321					\$	-					\$	-										
2 Urban				Acre	\$	1,371,510					\$	-					\$	-										
3 Dense Suburban				Acre	\$	908,134					\$	-					\$	-										
4 Suburban				Acre	\$	208,418					\$	-					\$	-										
5 Undeveloped				Acre	\$	3,642					\$	-					\$	-										
ROW required for Temp. Construction Easement				Acre							\$	-					\$	-										
1 Dense Urban				Acre							\$	-					\$	-										
2 Urban				Acre							\$	-					\$	-										
3 Dense Suburban				Acre							\$	-					\$	-										
4 Suburban				Acre							\$	-					\$	-										
5 Undeveloped				Acre							\$	-					\$	-										
Right-of-Way Required for Stations, Maintenance & Parking Facilities											\$	-					\$	-										
6 Dense Urban				Acre	\$	2,786,321					\$	-					\$	-										
7 Urban				Acre	\$	1,371,510					\$	-					\$	-										
8 Dense Suburban				Acre	\$	908,134					\$	-					\$	-										
9 Suburban				Acre	\$	208,418					\$	-					\$	-										
10 Undeveloped				Acre	\$	3,642					\$	-					\$	-										
Environmental Mitigation = 3% Line Costs											\$	3,037,233					\$	612,152			\$	2,522,785			\$	3,846,211		
System Elements																												
1 Signaling (ATC)				Mile	\$	2,070,000					1.04	\$	2,156,250				1.04	\$	2,156,250			1.04	\$	2,156,250				
2 Communications (w/ Fiber Optic Backbone)				Mile	\$	540,000					1.04	\$	562,500				1.04	\$	562,500			1.04	\$	562,500				
3 Wayside Protection System				Mile	\$	108,000					1.04	\$	112,500				1.04	\$	112,500			1.04	\$	112,500				
Electrification Items																												
1 Traction Power supply				Mile	\$	1,170,000					1.04	\$	1,218,750				1.04	\$	1,218,750			1.04	\$	1,218,750				
2 Traction Power Distribution				Mile	\$	1,485,000					1.04	\$	1,546,875				1.04	\$	1,546,875			1.04	\$	1,546,875				
Subtotal												\$	109,875,196					\$	26,614,094				\$	92,212,497			\$	137,650,120
Program Implementation Costs (per screening)												\$	28,018,175					\$	6,786,594				\$	23,514,187			\$	35,100,781
Program Implementation Costs																												
Contingencies (per screening) (25%)												\$	27,468,799					\$	6,653,523				\$	23,053,124			\$	34,412,530
Subtotal												\$	165,362,169					\$	40,054,211				\$	138,779,808			\$	207,163,430
Subtotal (Rounded)												\$	165,000,000					\$	40,000,000				\$	139,000,000			\$	207,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks)				Covered Trench (4 tracks)				Hybrid (2 tracks over 2 tracks)								
Subsection 7			Base: 2009 (3rd Quarter)	A				A				A									
				Start: 1970 + 00		End: 2025 + 00		1.04 Miles		Start: 1970 + 00		End: 2025 + 00		1.04 Miles		Start: 1970 + 00		End: 2025 + 00		1.04 Miles	
Subsection Dedtails						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)						Start: 1970 + 00	End: 2025 + 00	1.04 Miles			Start: 0 + 00		0.00 Miles			Start: 1970 + 00	End: 2025 + 00	1.04 Miles			
Double Track Trench (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 1970 + 00	End: 2025 + 00	1.04 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 1970 + 00	End: 2025 + 00	1.04 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Section - Total																					
1 Double Track Section - At Grade	Mile	\$	2,100,224					0 \$	-					0 \$	-			0.00 \$	-		
2 Double Track Section - On Structure	Mile	\$	4,700,160					0 \$	-					0 \$	-			0.00 \$	-		
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160					1.04 \$	4,896,000					0 \$	-			1.04 \$	4,896,000		
4 Double Track Section - In Trench	Mile	\$	4,700,160					0 \$	-					0 \$	-			1.04 \$	4,896,000		
											</										



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks)			Covered Trench (4 tracks)			Hybrid (2 tracks over 2 tracks)						
Subsection 7				Base: 2009 (3rd Quarter)	A			A			A						
					Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles		
Subsection Dedtails						Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 0 + 00		0.00 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 1970 + 00	End: 2025 + 00	1.04 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)				ea	\$	2,850,816	\$	-			\$	-			\$	-	
Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)				ea	\$	3,171,328	\$	-			\$	-			\$	-	
7 Street Bridging HSR Trench				ea	\$	1,398,784	\$	-			\$	-			\$	-	
8 Minor Crossing Closures				ea	\$	87,040	\$	-			\$	-			\$	-	
Building Items																	
1 Intermediate Passenger Stations				Each	\$	-	\$	-			\$	-			\$	-	
2 Terminal Passenger Stations				Each	\$	-	\$	-			\$	-			\$	-	
Caltrain Passenger Station - At-Grade				Each	\$	15,000,000	\$	-			\$	-			\$	-	
Caltrain Passenger Station - On Structure				Each	\$	15,000,000	\$	-			\$	-			\$	-	
Caltrain Passenger Station - In Tunnel or Subway				Each	\$	15,000,000	0	\$	-			\$	-			\$	-
Caltrain Passenger Station - In Trench				Each	\$	15,000,000	0	\$	-	1	15,000,000	1	\$	15,000,000			
3 Maintenance Facility				Each	\$	-	\$	-			\$	-			\$	-	
4 Parking - Structures				space	\$	-	\$	-			\$	-			\$	-	
5 Parking - At Grade				space	\$	-	\$	-			\$	-			\$	-	
Rail & Utility Relocation																	
1 Single Track Relocation (Temporary)				Mile	\$	2,000,896	\$	-			\$	-			\$	-	
2 Single Track Relocation (Permanent)				Mile	\$	2,000,896	\$	-			\$	-			\$	-	
Double Track Relocation (Permanent) - VTA LRT Cut and Cover Tunnel				Mile	\$	131,246,080											
3 Single Track Removal				Mile	\$	130,048	\$	-			\$	-			\$	-	
4 Major Utility Relocations - Dense Urban				Mile	\$	1,548,288	\$	-			\$	-			\$	-	
5 Major Utility Relocations - Urban				Mile	\$	1,084,416	\$	-			\$	-			\$	-	
6 Major Utility Relocations - Dense Suburban				Mile	\$	775,168	\$	-			\$	-			\$	-	
7 Major Utility Relocations - Suburban				Mile	\$	464,896	\$	-			\$	-			\$	-	
8 Major Utility Relocations - Undeveloped				Mile	\$	30,720	\$	-			\$	-			\$	-	
ROW (Not Included)																	
ROW required for each segment																	
1 Dense Urban				Acre	\$	2,786,321	\$	-			\$	-			\$	-	
2 Urban				Acre	\$	1,371,510	\$	-			\$	-			\$	-	
3 Dense Suburban				Acre	\$	908,134	\$	-			\$	-			\$	-	
4 Suburban				Acre	\$	208,418	\$	-			\$	-			\$	-	
5 Undeveloped				Acre	\$	3,642	\$	-			\$	-			\$	-	
ROW required for Temp. Construction Easement				Acre													
1 Dense Urban				Acre											\$	-	
2 Urban				Acre											\$	-	
3 Dense Suburban				Acre											\$	-	
4 Suburban				Acre											\$	-	
5 Undeveloped				Acre											\$	-	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																	
6 Dense Urban				Acre	\$	2,786,321	\$	-			\$	-			\$	-	
7 Urban				Acre	\$	1,371,510	\$	-			\$	-			\$	-	
8 Dense Suburban				Acre	\$	908,134	\$	-			\$	-			\$	-	
9 Suburban				Acre	\$	208,418	\$	-			\$	-			\$	-	
10 Undeveloped				Acre	\$	3,642	\$	-			\$	-			\$	-	
Environmental Mitigation = 3% Line Costs							\$	6,308,335			\$	9,859,392			\$	12,246,280	
System Elements																	
1 Signaling (ATC)				Mile	\$	2,070,000	1.04	\$	2,156,250	1.04	\$	2,156,250		1.04	\$	2,156,250	
2 Communications (w/ Fiber Optic Backbone)				Mile	\$	540,000	1.04	\$	562,500	1.04	\$	562,500		1.04	\$	562,500	
3 Wayside Protection System				Mile	\$	108,000	1.04	\$	112,500	1.04	\$	112,500		1.04	\$	112,500	
Electrification Items																	
1 Traction Power supply				Mile	\$	1,170,000	1.04	\$	1,218,750	1.04	\$	1,218,750		1.04	\$	1,218,750	
2 Traction Power Distribution				Mile	\$	1,485,000	1.04	\$	1,546,875	1.04	\$	1,546,875		1.04	\$	1,546,875	
Subtotal							\$	222,183,038			\$	344,102,669			\$	426,052,483	
Program Implementation Costs (per screening)							\$	56,656,675			\$	87,746,181			\$	108,643,383	
Program Implementation Costs																	
Contingencies (per screening) (25%)							\$	55,545,760			\$	86,025,667			\$	106,513,121	
Subtotal							\$	334,385,472			\$	517,874,517			\$	641,208,987	
Subtotal (Rounded)							\$	334,000,000			\$	518,000,000			\$	641,000,000	



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (4 tracks)				At-Grade (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)			
Subsection 7				Base: 2009 (3rd Quarter)	B				B				B				B			
					Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles	
Subsection Dedtails						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)					Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles	
Double Track Section - Total																				
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$	-			0.00	\$	-			0.00	\$	-	
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-	
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-	
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-	1.89	\$	8,901,818		0.00	\$
Four Track Section - Total																				
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-			1.89	\$	7,955,394			0.00	\$	-	
	Four-Track Section - On Structure	Mile	\$	9,400,320			1.89	\$	17,803,636			0	\$	-			0.00	\$	-	
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$	-			0	\$	-			0.00	\$	-	
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$	-			0	\$	-			0.00	\$	-	
Single Track - Total																				
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-	
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-	
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-	
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-	
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-			0	\$	-			0	\$	-	
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-	
Earthwork Items																				
1	Site Preparation - Undeveloped	Acre	\$	9,216			25.25	\$	232,727			0.00	\$	-			14.92	\$	137,521	
2	Total Cut	CY	\$	6.45			0	\$	-			0	\$	-			0.00	\$	-	
3	Total Fill	CY	\$	6.29			0	\$	-			0	\$	-			0.00	\$	-	
4	Borrow	CY	\$	12.58			0.00	\$	-			0.00	\$	-			0.00	\$	-	
5	Spoil	CY	\$	12.58			0.00	\$	-			0.00	\$	-			0.00	\$	-	
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$	-			0.00	\$	-			0.00	\$	-	
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-			1.89	\$	273,455			0.00	\$	-	
8	Special Drainage Facilities	5% Earthwork						\$	11,636				\$	13,673				\$	6,876	
Structures, Tunnels, Walls																				
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$	-			0.00 Miles	\$	-			0.00	\$	-	
	Standard Structure (4 tracks)	Mile	\$	52,459,008			1.89	\$	99,354,182			0.00 Miles			0.00		0.00			
2	High Structure	Mile	\$	40,424,448			0.00	\$	-				\$	-				\$	-	
3	Long Span Structure	Mile	\$	61,919,232				\$	-				\$	-				\$	-	
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-				\$	-				\$	-	
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.02	\$	1,743,360			0.03	\$	2,615,040				\$	-	
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-				\$	-				\$	-	
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-				\$	-	
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-				\$	-				\$	-	
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$	-			0	\$	-			0.00	\$	-	
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-				\$	-				\$	-	
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312																
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-				\$	-				\$	-	
12	Crossovers	ea	\$	442,368				\$	-				\$	-				\$	-	
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$	-			0	\$	-			0.00	\$	-	
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0.00	\$	-			0.00 Miles	\$	-			1.89	\$	-	
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336			0.00					0.00 Miles					0.00	\$	-	
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-				\$	-				\$	-	
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0.00	\$	-			0	\$	-			0.00	\$	-	
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$	-			0	\$	-			0.00	\$	-	
18	Containment Walls	Mile	\$	5,907,456				\$	-				\$	-			0.00	\$	-	
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-				\$	-				\$	-	
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-				\$	-				\$	-	
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-				\$	-				\$	-	
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624																
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792																
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			0.00	\$	-			0.00	\$	-	
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																
Grade Separations																				
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-				\$	-				\$	-	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			1	\$	19,926,528			2	\$	39,853,056				\$	-	
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680			1	\$	2,759,680				\$	-				\$	-	
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-				\$	-				\$	-	
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			0	\$	-			0	\$	-				\$	-	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-				\$	-				\$	-	



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (4 tracks)				At-Grade (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)						
Subsection 7				Base: 2009 (3rd Quarter)	B				B				B				B						
					Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles				
Subsection Dedtails						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 0 + 00		0.00 Miles				
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Elevated (Mile)					Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles				
6 Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)				ea	\$	2,850,816		\$	-		\$	-		\$	-		\$	-		\$	-		
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)				ea	\$	3,171,328	0	\$	-		0	\$	-		\$	-		\$	-		\$	-	
7 Street Bridging HSR Trench				ea	\$	1,398,784		\$	-			\$	-		2	\$	2,797,568		2	\$	2,797,568		
8 Minor Crossing Closures				ea	\$	87,040	1	\$	87,040		1	\$	87,040		1	\$	87,040		1	\$	87,040		
Building Items																							
1 Intermediate Passenger Stations				Each	\$	-		\$	-		\$	-		\$	-		\$	-		\$	-		
2 Terminal Passenger Stations				Each	\$	-		\$	-		\$	-		\$	-		\$	-		\$	-		
Caltrain Passenger Station - At-Grade				Each	\$	15,000,000	1	\$	15,000,000		1	\$	15,000,000		\$	-		\$	-		\$	-	
Caltrain Passenger Station - On Structure				Each	\$	15,000,000		\$	-		\$	-		\$	-		\$	-		\$	-		
Caltrain Passenger Station - In Tunnel or Subway				Each	\$	15,000,000		\$	-		\$	-		0	\$	-		0	\$	-		\$	-
Caltrain Passenger Station - In Trench				Each	\$	15,000,000		\$	-		\$	-		1	\$	15,000,000		1	\$	15,000,000		\$	-
3 Maintenance Facility				Each	\$	-		\$	-		\$	-		\$	-		\$	-		\$	-		
4 Parking - Structures				space	\$	-		\$	-		\$	-		\$	-		\$	-		\$	-		
5 Parking - At Grade				space	\$	-		\$	-		\$	-		\$	-		\$	-		\$	-		
Rail & Utility Relocation																							
1 Single Track Relocation (Temporary)				Mile	\$	2,000,896		\$	-		\$	-		\$	-		\$	-		\$	-		
2 Single Track Relocation (Permanent)				Mile	\$	2,000,896		\$	-		\$	-		\$	-		\$	-		\$	-		
Double Track Relocation (Permanent) - VTA LRT Cut and Cover Tunnel				Mile	\$	131,246,080	0.19	\$	24,857,212		0.42	\$	54,685,867		\$	-		\$	-		\$	-	
3 Single Track Removal				Mile	\$	130,048		\$	-		\$	-		\$	-		\$	-		\$	-		
4 Major Utility Relocations - Dense Urban				Mile	\$	1,548,288		\$	-		\$	-		\$	-		\$	-		\$	-		
5 Major Utility Relocations - Urban				Mile	\$	1,084,416		\$	-		\$	-		\$	-		\$	-		\$	-		
6 Major Utility Relocations - Dense Suburban				Mile	\$	775,168		\$	-		\$	-		\$	-		\$	-		\$	-		
7 Major Utility Relocations - Suburban				Mile	\$	464,896		\$	-		\$	-		\$	-		\$	-		\$	-		
8 Major Utility Relocations - Undeveloped				Mile	\$	30,720		\$	-		\$	-		\$	-		\$	-		\$	-		
ROW (Not Included)																							
ROW required for each segment																							
1 Dense Urban				Acre	\$	2,786,321		\$	-		\$	-		\$	-		\$	-		\$	-		
2 Urban				Acre	\$	1,371,510		\$	-		\$	-		\$	-		\$	-		\$	-		
3 Dense Suburban				Acre	\$	908,134		\$	-		\$	-		\$	-		\$	-		\$	-		
4 Suburban				Acre	\$	208,418		\$	-		\$	-		\$	-		\$	-		\$	-		
5 Undeveloped				Acre	\$	3,642		\$	-		\$	-		\$	-		\$	-		\$	-		
ROW required for Temp. Construction Easement				Acre																			
1 Dense Urban				Acre				\$	-		\$	-		\$	-		\$	-		\$	-		
2 Urban				Acre				\$	-		\$	-		\$	-		\$	-		\$	-		
3 Dense Suburban				Acre				\$	-		\$	-		\$	-		\$	-		\$	-		
4 Suburban				Acre				\$	-		\$	-		\$	-		\$	-		\$	-		
5 Undeveloped				Acre				\$	-		\$	-		\$	-		\$	-		\$	-		
Right-of-Way Required for Stations, Maintenance & Parking Facilities																							
6 Dense Urban				Acre	\$	2,786,321		\$	-		\$	-		\$	-		\$	-		\$	-		
7 Urban				Acre	\$	1,371,510		\$	-		\$	-		\$	-		\$	-		\$	-		
8 Dense Suburban				Acre	\$	908,134		\$	-		\$	-		\$	-		\$	-		\$	-		
9 Suburban				Acre	\$	208,418		\$	-		\$	-		\$	-		\$	-		\$	-		
10 Undeveloped				Acre	\$	3,642		\$	-		\$	-		\$	-		\$	-		\$	-		
Environmental Mitigation = 3% Line Costs								\$	5,453,280			\$	3,614,506			\$	4,076,347			\$	6,971,039		
System Elements																							
1 Signaling (ATC)				Mile	\$	2,070,000	1.89	\$	3,920,455		1.89	\$	3,920,455		1.89	\$	3,920,455		1.89	\$	3,920,455		
2 Communications (w/ Fiber Optic Backbone)				Mile	\$	540,000	1.89	\$	1,022,727		1.89	\$	1,022,727		1.89	\$	1,022,727		1.89	\$	1,022,727		
3 Wayside Protection System				Mile	\$	108,000	1.89	\$	204,545		1.89	\$	204,545		1.89	\$	204,545		1.89	\$	204,545		
Electrification Items																							
1 Traction Power supply				Mile	\$	1,170,000	1.89	\$	2,215,909		1.89	\$	2,215,909		1.89	\$	2,215,909		1.89	\$	2,215,909		
2 Traction Power Distribution				Mile	\$	1,485,000	1.89	\$	2,812,500		1.89	\$	2,812,500		1.89	\$	2,812,500		1.89	\$	2,812,500		
Subtotal								\$	197,405,418			\$	134,274,166			\$	150,130,700			\$	249,515,134		
Program Implementation Costs (per screening)								\$	50,338,382			\$	34,239,912			\$	38,283,328			\$	63,626,359		
Program Implementation Costs																							
Contingencies (per screening) (25%)								\$	49,351,355			\$	33,568,541			\$	37,532,675			\$	62,378,784		
Subtotal								\$	297,095,155			\$	202,082,620			\$	225,946,703			\$	375,520,277		
Subtotal (Rounded)								\$	297,000,000			\$	202,000,000			\$	226,000,000			\$	376,000,000		



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks)				Covered Trench (4 tracks)				Hybrid (2 tracks over 2 tracks)					
Subsection 7			Base: 2009 (3rd Quarter)	B				B				B						
				Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles				
Subsection Dedtails					Quant.	Cost			Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00			0.00 Miles					
Double Track Tunnel (Mile)					Start: 2025 + 00	End: 2125 + 00	1.89 Miles			Start: 0 + 00			0.00 Miles		Start: 2025 + 00		End: 2125 + 00	1.89 Miles
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00			0.00 Miles		Start: 2025 + 00		End: 2125 + 00	1.89 Miles
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00			0.00 Miles					
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 2025 + 00	End: 2125 + 00		1.89 Miles					
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00		0.00 Miles					
Double Track Section - Total																		
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$	-			0.00	\$	-	0.00	\$	-	
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-	0.00	\$	-	
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			1.89	\$	8,901,818			0.00	\$	-	1.89	\$	8,901,818	
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-	1.89	\$	8,901,818	
															0	\$	-	
															0	\$	-	
															0	\$	-	
															0	\$	-	
Four Track Section - Total																		
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-			0.00	\$	-	0.00	\$	-	
	Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$	-			0.00	\$	-	0.00	\$	-	
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$	-			1.89	\$	17,803,636	0.00	\$	-	
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$	-			0.00	\$	-	0.00	\$	-	
Single Track - Total																		
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-	0	\$	-	
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-			0	\$	-	0	\$	-	
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-			0	\$	-	0	\$	-	
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			0	\$	-	0	\$	-	
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-			0	\$	-	0	\$	-	
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-	0	\$	-	
Earthwork Items																		
1	Site Preparation - Undeveloped	Acre	\$	9,216			0.00	\$	-			25.25	\$	232,727	40.17	\$	370,248	
2	Total Cut	CY	\$	6.45			814815	\$	5,256,533			1629629.63	\$	10,513,067	2592592.59	\$	16,725,333	
3	Total Fill	CY	\$	6.29			0.00	\$	-			814814.81	\$	5,125,120	0.00	\$	-	
4	Borrow	CY	\$	12.58			0.00	\$	-			0.00	\$	-	0.00	\$	-	
5	Spoil	CY	\$	12.58			814815	\$	10,250,240			814814.81	\$	10,250,240	2592592.59	\$	32,614,400	
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$	-			0.00	\$	-	0.00	\$	-	
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-			0.00	\$	-	1.89	\$	273,455	
8	Special Drainage Facilities	5% Earthwork						\$	775,339				\$	1,306,058		\$	2,499,172	
Structures, Tunnels, Walls																		
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00 Miles	\$	-			0.00 Miles	\$	-	0	\$	-	
	Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00 Miles					0.00 Miles						
2	High Structure	Mile	\$	40,424,448				\$	-				\$	-		\$	-	
3	Long Span Structure	Mile	\$	61,919,232				\$	-				\$	-		\$	-	
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-				\$	-		\$	-	
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.01	\$	697,344			0.01	\$	697,344	0.01	\$	697,344	
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-				\$	-		\$	-	
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-		\$	-	
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-				\$	-		\$	-	
9	Double Track Drill & Blast	Mile	\$	146,887,680				\$	-			0	\$	-		\$	-	
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-				\$	-		\$	-	
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312			1.89 Miles	\$	201,964,606									
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896			0.00 Miles	\$	-									
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-				\$	-		\$	-	
12	Crossovers	ea	\$	442,368				\$	-				\$	-		\$	-	
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				\$	-			0	\$	-	0.00	\$	-	
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0.00	\$	-			0.00	\$	-	0	\$	-	
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336			0.00					0.00						
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-				\$	-		\$	-	
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856														
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			1.89	\$	22,440,727			1.89	\$	22,440,727	1.89	\$	22,440,727	
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$	-			0.00	\$	-	0	\$	-	
18	Containment Walls	Mile	\$	5,907,456				\$	-				\$	-	0	\$	-	
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-				\$	-		\$	-	
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-				\$	-		\$	-	
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-				\$	-		\$	-	
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624														
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792														
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			1.89	\$	497,144,242	0.00	\$	-	
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114											1.89	\$	622,199,080	
Grade Separations																		
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-				\$	-		\$	-	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$	-				\$	-		\$	-	
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	-				\$	-		\$	-	
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-				\$	-		\$	-	
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$	-				\$	-		\$	-	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-				\$	-		\$	-	



COST ELEMENTS				UNIT	UNIT PRICE	Tunnel (2 tracks)				Covered Trench (4 tracks)				Hybrid (2 tracks over 2 tracks)					
Subsection 7				Base: 2009 (3rd Quarter)	B				B				B						
					Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles				
Subsection Dedtails							Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)							0.00 Miles				0.00 Miles				0.00 Miles				
Double Track Elevated (Mile)							0.00 Miles				0.00 Miles								
Double Track Tunnel (Mile)							0.00 Miles				0.00 Miles								
Double Track Trench (Mile)							0.00 Miles				0.00 Miles								
Four Track Construction/Reconstruction At-Grade (Mile)							0.00 Miles				0.00 Miles				0.00 Miles				
Four Track Elevated (Mile)							0.00 Miles				0.00 Miles								
Four Track Tunnel (Mile)						End: 0 + 00	0.00 Miles		Start: 2025 + 00	End: 2125 + 00	1.89 Miles								
Four Track Trench (Mile)						End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles								
6 Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)					ea	\$	2,850,816				\$	-				\$	-		
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)					ea	\$	3,171,328					-					-		
7 Street Bridging HSR Trench					ea	\$	1,398,784	0			0	\$	-				-		
8 Minor Crossing Closures					ea	\$	87,040	0			0	\$	-				-		
Building Items																			
1 Intermediate Passenger Stations					Each	\$	-				\$	-				\$	-		
2 Terminal Passenger Stations					Each	\$	-				\$	-				\$	-		
Caltrain Passenger Station - At-Grade					Each	\$	15,000,000				\$	-				\$	-		
Caltrain Passenger Station - On Structure					Each	\$	15,000,000				\$	-				\$	-		
Caltrain Passenger Station - In Tunnel or Subway					Each	\$	15,000,000	0			1	\$	15,000,000		0	\$	-		
Caltrain Passenger Station - In Trench					Each	\$	15,000,000	0			0	\$	-		1	\$	15,000,000		
3 Maintenance Facility					Each	\$	-				\$	-				\$	-		
4 Parking - Structures					space	\$	-				\$	-				\$	-		
5 Parking - At Grade					space	\$	-				\$	-				\$	-		
Rail & Utility Relocation																			
1 Single Track Relocation (Temporary)					Mile	\$	2,000,896				\$	-				\$	-		
2 Single Track Relocation (Permanent)					Mile	\$	2,000,896				\$	-				\$	-		
Double Track Relocation (Permanent) - VTA LRT Cut and Cover Tunnel					Mile	\$	131,246,080												
3 Single Track Removal					Mile	\$	130,048				\$	-				\$	-		
4 Major Utility Relocations - Dense Urban					Mile	\$	1,548,288				\$	-				\$	-		
5 Major Utility Relocations - Urban					Mile	\$	1,084,416				\$	-				\$	-		
6 Major Utility Relocations - Dense Suburban					Mile	\$	775,168				\$	-				\$	-		
7 Major Utility Relocations - Suburban					Mile	\$	464,896				\$	-				\$	-		
8 Major Utility Relocations - Undeveloped					Mile	\$	30,720				\$	-				\$	-		
ROW (Not Included)																			
ROW required for each segment																			
1 Dense Urban					Acre	\$	2,786,321				\$	-				\$	-		
2 Urban					Acre	\$	1,371,510				\$	-				\$	-		
3 Dense Suburban					Acre	\$	908,134				\$	-				\$	-		
4 Suburban					Acre	\$	208,418				\$	-				\$	-		
5 Undeveloped					Acre	\$	3,642				\$	-				\$	-		
ROW required for Temp. Construction Easement					Acre														
1 Dense Urban					Acre											\$	-		
2 Urban					Acre											\$	-		
3 Dense Suburban					Acre											\$	-		
4 Suburban					Acre											\$	-		
5 Undeveloped					Acre											\$	-		
Right-of-Way Required for Stations, Maintenance & Parking Facilities																			
6 Dense Urban					Acre	\$	2,786,321				\$	-				\$	-		
7 Urban					Acre	\$	1,371,510				\$	-				\$	-		
8 Dense Suburban					Acre	\$	908,134				\$	-				\$	-		
9 Suburban					Acre	\$	208,418				\$	-				\$	-		
10 Undeveloped					Acre	\$	3,642				\$	-				\$	-		
Environmental Mitigation = 3% Line Costs										\$	7,508,598				\$	17,415,395		\$	21,918,702
System Elements																			
1 Signaling (ATC)					Mile	\$	2,070,000		1.89	\$	3,920,455		1.89	\$	3,920,455		1.89	\$	3,920,455
2 Communications (w/ Fiber Optic Backbone)					Mile	\$	540,000		1.89	\$	1,022,727		1.89	\$	1,022,727		1.89	\$	1,022,727
3 Wayside Protection System					Mile	\$	108,000		1.89	\$	204,545		1.89	\$	204,545		1.89	\$	204,545
Electrification Items																			
1 Traction Power supply					Mile	\$	1,170,000		1.89	\$	2,215,909		1.89	\$	2,215,909		1.89	\$	2,215,909
2 Traction Power Distribution					Mile	\$	1,485,000		1.89	\$	2,812,500		1.89	\$	2,812,500		1.89	\$	2,812,500
Subtotal										\$	267,971,342			\$	608,104,693			\$	762,718,233
Program Implementation Costs (per screening)										\$	68,332,692			\$	155,066,697			\$	194,493,149
Program Implementation Costs																			
Contingencies (per screening) (25%)										\$	66,992,836			\$	152,026,173			\$	190,679,558
Subtotal										\$	403,296,870			\$	915,197,563			\$	1,147,890,941
Subtotal (Rounded)										\$	403,000,000			\$	915,000,000			\$	1,148,000,000



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench			
Subsection 7			Base: 2009 (3rd Quarter)		C				C				C				C			
					Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles	
Subsection Dedtails							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total																				
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$ -			1.12	\$ 5,252,073			0.00	\$ -			0.00	\$ -
Four Track Section - Total																				
	Four-track Section - At Grade	Mile	\$	4,200,448			1.12	\$ 4,693,682			0.00	\$ -			0.00	\$ -			0.00	\$ -
	Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0	\$ -			0.00	\$ -			0.00	\$ -			1.12	\$ 10,504,145
	Four-Track Section - In Trench	Mile	\$	9,400,320			0	\$ -			0.00	\$ -			1.12	\$ 10,504,145			0.00	\$ -
Single Track - Total																				
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -			0	\$ -
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -			0	\$ -
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -			0	\$ -
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -			0	\$ -
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$ -			0	\$ -			0	\$ -			0	\$ -
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -			0	\$ -
Earthwork Items																				
1	Site Preparation - Undeveloped	Acre	\$	9,216			0.00	\$ -			8.80	\$ 81,137			14.90	\$ 137,309			14.90	\$ 137,309
2	Total Cut	CY	\$	6.45			0	\$ -			0.00	\$ -			961481.48	\$ 6,202,709			961481.48	\$ 6,202,709
3	Total Fill	CY	\$	6.29			0	\$ -			0.00	\$ -			0.00	\$ -			480740.74	\$ 3,023,821
4	Borrow	CY	\$	12.58			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
5	Spoil	CY	\$	12.58			0.00	\$ -			0.00	\$ -			961481.48	\$ 12,095,283			480740.74	\$ 6,047,642
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$ -			0.00	\$ -			14.90	\$ 91,539			0.00	\$ -
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			1.12	\$ 161,338			0.00	\$ -			1.12	\$ 161,338			0.00	\$ -
8	Special Drainage Facilities	5% Earthwork						\$ 8,067				\$ 4,057				\$ 934,409				\$ 770,574
Structures, Tunnels, Walls																				
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00 Miles	\$ -
	Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00 Miles	\$ -
2	High Structure	Mile	\$	40,424,448				\$ -				\$ -				\$ -				\$ -
3	Long Span Structure	Mile	\$	61,919,232				\$ -				\$ -				\$ -				\$ -
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$ -				\$ -				\$ -				\$ -
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$ -				\$ -				\$ -			0.00	\$ -
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$ -				\$ -				\$ -				\$ -
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$ -				\$ -				\$ -				\$ -
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$ -				\$ -				\$ -				\$ -
9	Double Track Drill & Blast	Mile	\$	146,887,680			0	\$ -			0.00	\$ -			0.00	\$ -			0	\$ -
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$ -				\$ -				\$ -				\$ -
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312				\$ -				\$ -				\$ -				\$ -
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896				\$ -				\$ -				\$ -				\$ -
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$ -				\$ -				\$ -				\$ -
12	Crossovers	ea	\$	442,368				\$ -				\$ -				\$ -				\$ -
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0	\$ -			0.00	\$ -			0.00	\$ -			0	\$ -
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0.00 Miles	\$ -			1.12	\$ 64,278,962			0.00	\$ -			0.00	\$ -
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336			0.00 Miles	\$ -			0.00	\$ -			1.12	\$ 96,418,444			0.00	\$ -
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$ -				\$ -				\$ -				\$ -
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856				\$ -				\$ -				\$ -				\$ -
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0	\$ -			0.00	\$ -			0.00	\$ -			1.12	\$ 13,240,029
17	Retaining Walls	Mile	\$	8,613,888			0	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
18	Containment Walls	Mile	\$	5,907,456				\$ -			0.00	\$ -			0.00	\$ -				\$ -
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$ -				\$ -				\$ -				\$ -
	Four Track Drill & Blast	Mile	\$	293,775,360				\$ -				\$ -				\$ -				\$ -
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$ -				\$ -				\$ -				\$ -
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624				\$ -				\$ -				\$ -				\$ -
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792				\$ -				\$ -				\$ -				\$ -
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$ -			0.00	\$ -			0.00	\$ -			1.12	\$ 293,315,103
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114				\$ -				\$ -				\$ -				\$ -
Grade Separations																				
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$ -				\$ -				\$ -				\$ -
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$ -				\$ -				\$ -				\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$ -				\$ -				\$ -				\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$ -				\$ -				\$ -				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			0	\$ -				\$ -				\$ -				\$ -
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$ -				\$ -				\$ -				\$ -



COST ELEMENTS				UNIT	UNIT PRICE	At-Grade (4 tracks)				Open Trench (2 tracks)				Open Trench (4 tracks)				Covered Trench					
Subsection 7					Base: 2009 (3rd Quarter)	C				C				C				C					
						Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles			
Subsection Dedtails							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)							0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
Double Track Elevated (Mile)							0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Tunnel (Mile)							0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Double Track Trench (Mile)							0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Construction/Reconstruction At-Grade (Mile)							1.12 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Elevated (Mile)							0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles				
Four Track Tunnel (Mile)							0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles				
Four Track Trench (Mile)							0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles				
6 Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)					ea	\$	2,850,816																
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)					ea	\$	3,171,328																
7 Street Bridging HSR Trench					ea	\$	1,398,784																
8 Minor Crossing Closures					ea	\$	87,040																
Building Items																							
1 Intermediate Passenger Stations					Each	\$	-																
2 Terminal Passenger Stations					Each	\$	-																
Caltrain Passenger Station - At-Grade					Each	\$	15,000,000	0															
Caltrain Passenger Station - On Structure					Each	\$	15,000,000																
Caltrain Passenger Station - In Tunnel or Subway					Each	\$	15,000,000																
Caltrain Passenger Station - In Trench					Each	\$	15,000,000																
3 Maintenance Facility					Each	\$	-																
4 Parking - Structures					space	\$	-																
5 Parking - At Grade					space	\$	-																
Rail & Utility Relocation																							
1 Single Track Relocation (Temporary)					Mile	\$	2,000,896																
2 Single Track Relocation (Permanent)					Mile	\$	2,000,896																
Double Track Relocation (Permanent) - VTA LRT Cut and Cover Tunnel					Mile	\$	131,246,080	0.76		\$	99,428,848												
3 Single Track Removal					Mile	\$	130,048																
4 Major Utility Relocations - Dense Urban					Mile	\$	1,548,288																
5 Major Utility Relocations - Urban					Mile	\$	1,084,416																
6 Major Utility Relocations - Dense Suburban					Mile	\$	775,168																
7 Major Utility Relocations - Suburban					Mile	\$	464,896																
8 Major Utility Relocations - Undeveloped					Mile	\$	30,720																
ROW (Not Included)																							
ROW required for each segment																							
1 Dense Urban					Acre	\$	2,786,321																
2 Urban					Acre	\$	1,371,510																
3 Dense Suburban					Acre	\$	908,134																
4 Suburban					Acre	\$	208,418																
5 Undeveloped					Acre	\$	3,642																
ROW required for Temp. Construction Easement					Acre																		
1 Dense Urban					Acre																		
2 Urban					Acre																		
3 Dense Suburban					Acre																		
4 Suburban					Acre																		
5 Undeveloped					Acre																		
Right-of-Way Required for Stations, Maintenance & Parking Facilities																							
6 Dense Urban					Acre	\$	2,786,321																
7 Urban					Acre	\$	1,371,510																
8 Dense Suburban					Acre	\$	908,134																
9 Suburban					Acre	\$	208,418																
10 Undeveloped					Acre	\$	3,642																
Environmental Mitigation = 3% Line Costs										\$	3,128,758						\$	3,796,355			\$	9,997,240	
System Elements																							
1 Signaling (ATC)					Mile	\$	2,070,000	1.12		\$	2,313,068	1.12		\$	2,313,068	1.12		\$	2,313,068	1.12		\$	2,313,068
2 Communications (w/ Fiber Optic Backbone)					Mile	\$	540,000	1.12		\$	603,409	1.12		\$	603,409	1.12		\$	603,409	1.12		\$	603,409
3 Wayside Protection System					Mile	\$	108,000	1.12		\$	120,682	1.12		\$	120,682	1.12		\$	120,682	1.12		\$	120,682
Electrification Items																							
1 Traction Power supply					Mile	\$	1,170,000	1.12		\$	1,307,386	1.12		\$	1,307,386	1.12		\$	1,307,386	1.12		\$	1,307,386
2 Traction Power Distribution					Mile	\$	1,485,000	1.12		\$	1,659,375	1.12		\$	1,659,375	1.12		\$	1,659,375	1.12		\$	1,659,375
Subtotal										\$	113,424,615			\$	77,708,637			\$	136,345,453			\$	349,242,493
Program Implementation Costs (per screening)										\$	28,923,277			\$	19,815,702			\$	34,768,091			\$	89,056,836
Program Implementation Costs																							
Contingencies (per screening) (25%)										\$	28,356,154			\$	19,427,159			\$	34,086,363			\$	87,310,623
Subtotal										\$	170,704,045			\$	116,951,498			\$	205,199,907			\$	525,609,952
Subtotal (Rounded)										\$	171,000,000			\$	117,000,000			\$	205,000,000			\$	526,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)				
Subsection 7				Base: 2009 (3rd Quarter)	C				C				
					Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		
Subsection Dedtails							Quant.	Cost			Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Section - Total													
1	Double Track Section - At Grade	Mile	\$	2,100,224			0	\$	-		0.00	\$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160			0	\$	-		0.00	\$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			1.12	\$	5,252,073		1.12	\$	5,252,073
4	Double Track Section - In Trench	Mile	\$	4,700,160			0	\$	-		1.12	\$	5,252,073
											0	\$	-
											0	\$	-
											0	\$	-
											0	\$	-
Four Track Section - Total													
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-		0.00	\$	-
	Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$	-		0.00	\$	-
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$	-		0.00	\$	-
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$	-		0.00	\$	-
Single Track - Total													
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-		0	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-		0	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-		0	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-		0	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-		0	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-		0	\$	-
Earthwork Items													
1	Site Preparation - Undeveloped	Acre	\$	9,216			0.00	\$	-		23.70	\$	218,446
2	Total Cut	CY	\$	6.45			480741	\$	3,101,355		1529629.63	\$	9,867,947
3	Total Fill	CY	\$	6.29			0.00	\$	-		0.00	\$	-
4	Borrow	CY	\$	12.58			0.00	\$	-		0.00	\$	-
5	Spoil	CY	\$	12.58			480741	\$	6,047,642		1529629.63	\$	19,242,496
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$	-		0.00	\$	-
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-		1.12	\$	161,338
8	Special Drainage Facilities	5% Earthwork						\$	457,450			\$	1,474,511
Structures, Tunnels, Walls													
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.00	\$	-		0	\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00						
2	High Structure	Mile	\$	40,424,448				\$	-			\$	-
3	Long Span Structure	Mile	\$	61,919,232				\$	-			\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-			\$	-
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408				\$	-			\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-			\$	-
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-			\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-			\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680				\$	-			\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-			\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312			0.00	\$	-				
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896			1.12	\$	197,472,213				
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-			\$	-
12	Crossovers	ea	\$	442,368				\$	-			\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				\$	-		0.00	\$	-
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0.00	\$	-		0	\$	-
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336			0.00						
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-			\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856									
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			1.12	\$	13,240,029		1.12	\$	13,240,029
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$	-		0	\$	-
18	Containment Walls	Mile	\$	5,907,456				\$	-		0	\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-			\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-			\$	-
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-			\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624									
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792									
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-		0.00	\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114							1.12	\$	367,097,457
Grade Separations													
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-			\$	-
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$	-			\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	-			\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-			\$	-
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$	-			\$	-
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-			\$	-



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)				
Subsection 7			Base: 2009 (3rd Quarter)	C				C					
				Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles			
Subsection Dedtails						Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)				Start: 2125 + 00	End: 2184 + 00	1.12 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles			
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 2125 + 00	End: 2184 + 00	1.12 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles			
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
6	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$	-			\$	-
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-			\$	-
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$	-			\$	-
8	Minor Crossing Closures	ea	\$	87,040				\$	-			\$	-
Building Items													
1	Intermediate Passenger Stations	Each	\$	-				\$	-			\$	-
2	Terminal Passenger Stations	Each	\$	-				\$	-			\$	-
	Caltrain Passenger Station - At-Grade	Each	\$	\$15,000,000				\$	-			\$	-
	Caltrain Passenger Station - On Structure	Each	\$	\$15,000,000				\$	-			\$	-
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	\$15,000,000			0	\$	-			\$	-
	Caltrain Passenger Station - In Trench	Each	\$	\$15,000,000			0	\$	-			\$	-
3	Maintenance Facility	Each	\$	-				\$	-			\$	-
4	Parking - Structures	space	\$	-				\$	-			\$	-
5	Parking - At Grade	space	\$	-				\$	-			\$	-
Rail & Utility Relocation													
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-			\$	-
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-			\$	-
	Double Track Relocation (Permanent) - VTA LRT Cut and Cover Tunnel	Mile	\$	131,246,080									
3	Single Track Removal	Mile	\$	130,048				\$	-			\$	-
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-			\$	-
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-			\$	-
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-			\$	-
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-			\$	-
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-			\$	-
ROW (Not Included)													
ROW required for each segment													
1	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-
2	Urban	Acre	\$	1,371,510				\$	-			\$	-
3	Dense Suburban	Acre	\$	908,134				\$	-			\$	-
4	Suburban	Acre	\$	208,418				\$	-			\$	-
5	Undeveloped	Acre	\$	3,642				\$	-			\$	-
	ROW required for Temp. Construction Easement	Acre											
1	Dense Urban	Acre										\$	-
2	Urban	Acre										\$	-
3	Dense Suburban	Acre										\$	-
4	Suburban	Acre										\$	-
5	Undeveloped	Acre										\$	-
	Right-of-Way Required for Stations, Maintenance & Parking Facilities												
6	Dense Urban	Acre	\$	2,786,321				\$	-			\$	-
7	Urban	Acre	\$	1,371,510				\$	-			\$	-
8	Dense Suburban	Acre	\$	908,134				\$	-			\$	-
9	Suburban	Acre	\$	208,418				\$	-			\$	-
10	Undeveloped	Acre	\$	3,642				\$	-			\$	-
	Environmental Mitigation = 3% Line Costs							\$	6,767,123				\$ 12,654,191
System Elements													
1	Signaling (ATC)	Mile	\$	2,070,000			1.12	\$	2,313,068			1.12	\$ 2,313,068
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.12	\$	603,409			1.12	\$ 603,409
3	Wayside Protection System	Mile	\$	108,000			1.12	\$	120,682			1.12	\$ 120,682
Electrification Items													
1	Traction Power supply	Mile	\$	1,170,000			1.12	\$	1,307,386			1.12	\$ 1,307,386
2	Traction Power Distribution	Mile	\$	1,485,000			1.12	\$	1,659,375			1.12	\$ 1,659,375
Subtotal								\$	238,341,805				\$ 440,464,482
Program Implementation Costs (per screening)								\$	60,777,160				\$ 112,318,443
Program Implementation Costs													
Contingencies (per screening) (25%)								\$	59,585,451				\$ 110,116,120
Subtotal								\$	358,704,416				\$ 662,899,045
Subtotal (Rounded)								\$	359,000,000				\$ 663,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (2 tracks)				Elevated Viaduct (4 tracks)				At-Grade (4 tracks)				Open Trench (2 tracks)					
Subsection 7			Base: 2009 (3rd		D1				D1				D1				D1					
					Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles			
Subsection Dedtails					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)					Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles			
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles			
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 0 + 00		0.00 Miles			
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Section - Total																						
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$	-			0.00	\$	-			0.00	\$	-			
2	Double Track Section - On Structure	Mile	\$	4,700,160			1.06	\$	4,985,018			0.00	\$	-			0.00	\$	-			
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-			
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			1.06	\$	4,985,018			
Four Track Section - Total																						
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-			0.00	\$	-	1.06	\$	4,455,021		0.00	\$	-	
	Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$	-			1.06	\$	9,970,036	0	\$	-		0.00	\$	-	
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$	-			0.00	\$	-	0	\$	-		0.00	\$	-	
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$	-			0.00	\$	-	0	\$	-		0.00	\$	-	
Single Track - Total																						
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-			
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-			
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-			
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-			
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-			0	\$	-			0	\$	-			
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-			
Earthwork Items																						
1	Site Preparation - Undeveloped	Acre	\$	9,216			8.36	\$	77,012			14.14	\$	130,327			0.00	\$	-	8.36	\$	77,012
2	Total Cut	CY	\$	6.45			0	\$	-			0	\$	-			0.00	\$	-	0.00	\$	-
3	Total Fill	CY	\$	6.29			0	\$	-			0	\$	-			0.00	\$	-	0.00	\$	-
4	Borrow	CY	\$	12.58			0.00	\$	-			0.00	\$	-			0.00	\$	-	0.00	\$	-
5	Spoil	CY	\$	12.58			0.00	\$	-			0.00	\$	-			0.00	\$	-	0.00	\$	-
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$	-			0.00	\$	-			0.00	\$	-	0.00	\$	-
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-			0.00	\$	-			1.06	\$	153,135	0.00	\$	-
8	Special Drainage Facilities	5% Earthwork						\$	3,851				\$	6,516				\$	7,657		\$	3,851
Structures, Tunnels, Walls																						
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			1.06	\$	37,092,228			0.00	\$	-			0.00	\$	-	0.00	\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008								1.06	\$	55,638,342			0.00					
2	High Structure	Mile	\$	40,424,448				\$	-				\$	-				\$	-		\$	-
3	Long Span Structure	Mile	\$	61,919,232				\$	-				\$	-				\$	-		\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-				\$	-				\$	-		\$	-
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.02	\$	1,743,360			0.02	\$	1,743,360			0.01	\$	871,680		\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-				\$	-				\$	-		\$	-
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-				\$	-		\$	-
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-				\$	-				\$	-		\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$	-			0.00	\$	-			0	\$	-	0.00	\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	174,231,030				\$	-				\$	-				\$	-		\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312									\$	-				\$	-		\$	-
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896									\$	-				\$	-		\$	-
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-				\$	-				\$	-		\$	-
12	Crossovers	ea	\$	442,368				\$	-				\$	-				\$	-		\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$	-			0.00	\$	-			0	\$	-	0.00	\$	-
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0.00	\$	-			0.00	\$	-			0.00 Miles	\$	-	1.06	\$	61,010,541
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336								0.00					0.00 Miles			0.00	\$	-
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-				\$	-				\$	-		\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856									\$	-				\$	-		\$	-
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0.00	\$	-			0.00	\$	-			0	\$	-	0.00	\$	-
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$	-			0.00	\$	-			0	\$	-	0.00	\$	-
18	Containment Walls	Mile	\$	5,907,456			0.00	\$	-				\$	-				\$	-	0.00	\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-				\$	-				\$	-		\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-				\$	-				\$	-		\$	-
	Four Track Mined (Soft Soil)	Mile	\$	348,462,059				\$	-				\$	-				\$	-		\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624									\$	-				\$	-		\$	-
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792									\$	-				\$	-		\$	-
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			0.00	\$	-			0.00	\$	-	0.00	\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																		-
Grade Separations																						
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352																		



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (2 tracks)				Elevated Viaduct (4 tracks)				At-Grade (4 tracks)				Open Trench (2 tracks)				
Subsection 7			Base: 2009 (3rd		D1				D1				D1				D1				
					Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles		
Subsection Dedtails							Quant.	Cost					Quant.	Cost					Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 0 + 00		0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
6	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$ -				\$ -				\$ -				\$ -	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$ -				\$ -				\$ -				\$ -	
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$ -				\$ -				\$ -		1		\$ 1,398,784	
8	Minor Crossing Closures	ea	\$	87,040				\$ -				\$ -				\$ -				\$ -	
Building Items																					
1	Intermediate Passenger Stations	Each	\$	-				\$ -				\$ -				\$ -				\$ -	
2 Terminal Passenger Stations			Each	\$ -				\$ -				\$ -				\$ -				\$ -	
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$ -				\$ -			0	\$ -				\$ -	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000			0	\$ -			0	\$ -				\$ -				\$ -	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$ -				\$ -				\$ -				\$ -	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$ -				\$ -				\$ -				\$ -	
3	Maintenance Facility	Each	\$	-				\$ -				\$ -				\$ -		0		\$ -	
4	Parking - Structures	space	\$	-				\$ -				\$ -				\$ -				\$ -	
5	Parking - At Grade	space	\$	-				\$ -				\$ -				\$ -				\$ -	
Rail & Utility Relocation																					
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -				\$ -				\$ -				\$ -	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$ -				\$ -				\$ -				\$ -	
	Double Track Relocation (Permanent) - VTA LRT Cut and Cover Tunnel	Mile	\$	131,246,080				\$ -				\$ -				\$ -				\$ -	
3	Single Track Removal	Mile	\$	130,048				\$ -				\$ -				\$ -				\$ -	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$ -				\$ -				\$ -				\$ -	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$ -				\$ -				\$ -				\$ -	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$ -				\$ -				\$ -				\$ -	
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$ -				\$ -				\$ -				\$ -	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$ -				\$ -				\$ -				\$ -	
ROW (Not Included)																					
ROW required for each segment																					
1	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -				\$ -				\$ -	
2	Urban	Acre	\$	1,371,510				\$ -				\$ -				\$ -				\$ -	
3	Dense Suburban	Acre	\$	908,134				\$ -				\$ -				\$ -				\$ -	
4	Suburban	Acre	\$	208,418				\$ -				\$ -				\$ -				\$ -	
5	Undeveloped	Acre	\$	3,642				\$ -				\$ -				\$ -				\$ -	
ROW required for Temp. Construction Easement																					
1	Dense Urban	Acre						\$ -				\$ -				\$ -				\$ -	
2	Urban	Acre						\$ -				\$ -				\$ -				\$ -	
3	Dense Suburban	Acre						\$ -				\$ -				\$ -				\$ -	
4	Suburban	Acre						\$ -				\$ -				\$ -				\$ -	
5	Undeveloped	Acre						\$ -				\$ -				\$ -				\$ -	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																					
6	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -				\$ -				\$ -	
7	Urban	Acre	\$	1,371,510				\$ -				\$ -				\$ -				\$ -	
8	Dense Suburban	Acre	\$	908,134				\$ -				\$ -				\$ -				\$ -	
9	Suburban	Acre	\$	208,418				\$ -				\$ -				\$ -				\$ -	
10	Undeveloped	Acre	\$	3,642				\$ -				\$ -				\$ -				\$ -	
	Environmental Mitigation = 3% Line Costs							\$ 1,317,044				\$ 2,024,657				\$ 1,360,216				\$ 2,024,256	
System Elements																					
1	Signaling (ATC)	Mile	\$	2,070,000			1.06	\$ 2,195,455				1.06	\$ 2,195,455			1.06	\$ 2,195,455			1.06	\$ 2,195,455
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			1.06	\$ 572,727				1.06	\$ 572,727			1.06	\$ 572,727			1.06	\$ 572,727
3	Wayside Protection System	Mile	\$	108,000			1.06	\$ 114,545				1.06	\$ 114,545			1.06	\$ 114,545			1.06	\$ 114,545
Electrification Items																					
1	Traction Power supply	Mile	\$	1,170,000			1.06	\$ 1,240,909				1.06	\$ 1,240,909			1.06	\$ 1,240,909			1.06	\$ 1,240,909
2	Traction Power Distribution	Mile	\$	1,485,000			1.06	\$ 1,575,000				1.06	\$ 1,575,000			1.06	\$ 1,575,000			1.06	\$ 1,575,000
Subtotal								\$ 50,917,149				\$ 75,211,876				\$ 52,399,401				\$ 75,198,097	
Program Implementation Costs (per screening)								\$ 12,983,873				\$ 19,179,028				\$ 13,361,847				\$ 19,175,515	
Program Implementation Costs																					
Contingencies (per screening) (25%)								\$ 12,729,287				\$ 18,802,969				\$ 13,099,850				\$ 18,799,524	
Subtotal								\$ 76,630,309				\$ 113,193,873				\$ 78,861,098				\$ 113,173,137	
Subtotal (Rounded)								\$ 77,000,000				\$ 113,000,000				\$ 79,000,000				\$ 113,000,000	



[illegible]



COST ELEMENTS				UNIT	UNIT PRICE	Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)					
Subsection 7				Base: 2009 (3rd		D1				D1				D1				D1					
						Start: 2184 + 00		End: 2240 + 00		1.06 Miles		Start: 2184 + 00		End: 2240 + 00		1.06 Miles		Start: 2184 + 00		End: 2240 + 00		1.06 Miles	
Subsection Dedtails								Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Double Track Elevated (Mile)						Start: 0 + 00	0.00 Miles	Start: 0 + 00		0.00 Miles	Start: 0 + 00	0.00 Miles											
Double Track Tunnel (Mile)						Start: 0 + 00	0.00 Miles	Start: 0 + 00		0.00 Miles	Start: 2184 + 00	End: 2240 + 00		1.06 Miles									
Double Track Trench (Mile)						Start: 0 + 00	0.00 Miles	Start: 0 + 00		0.00 Miles	Start: 0 + 00	0.00 Miles											
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles			
Four Track Elevated (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles											
Four Track Tunnel (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2184 + 00	End: 2240 + 00	1.06 Miles											
Four Track Trench (Mile)						Start: 2184 + 00	End: 2240 + 00	1.06 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles											
6 Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)				ea	\$	3,563,520																	
7 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)				ea	\$	3,171,328																	
7 Street Bridging HSR Trench				ea	\$	1,398,784		1	1,398,784										1	1,398,784			
8 Minor Crossing Closures				ea	\$	87,040																	
Building Items																							
1 Intermediate Passenger Stations				Each	\$	-																	
2 Terminal Passenger Stations				Each	\$	-																	
Caltrain Passenger Station - At-Grade				Each	\$	15,000,000																	
Caltrain Passenger Station - On Structure				Each	\$	15,000,000																	
Caltrain Passenger Station - In Tunnel or Subway				Each	\$	15,000,000																	
Caltrain Passenger Station - In Trench				Each	\$	15,000,000		0															
3 Maintenance Facility				Each	\$	-																	
4 Parking - Structures				space	\$	-																	
5 Parking - At Grade				space	\$	-																	
Rail & Utility Relocation																							
1 Single Track Relocation (Temporary)				Mile	\$	2,000,896																	
2 Single Track Relocation (Permanent)				Mile	\$	2,000,896																	
Double Track Relocation (Permanent) - VTA LRT Cut and Cover Tunnel				Mile	\$	131,246,080																	
3 Single Track Removal				Mile	\$	130,048																	
4 Major Utility Relocations - Dense Urban				Mile	\$	1,548,288																	
5 Major Utility Relocations - Urban				Mile	\$	1,084,416																	
6 Major Utility Relocations - Dense Suburban				Mile	\$	775,168																	
7 Major Utility Relocations - Suburban				Mile	\$	464,896																	
8 Major Utility Relocations - Undeveloped				Mile	\$	30,720																	
ROW (Not Included)																							
ROW required for each segment																							
1 Dense Urban				Acre	\$	2,786,321																	
2 Urban				Acre	\$	1,371,510																	
3 Dense Suburban				Acre	\$	908,134																	
4 Suburban				Acre	\$	208,418																	
5 Undeveloped				Acre	\$	3,642																	
ROW required for Temp. Construction Easement				Acre																			
1 Dense Urban				Acre																			
2 Urban				Acre																			
3 Dense Suburban				Acre																			
4 Suburban				Acre																			
5 Undeveloped				Acre																			
Right-of-Way Required for Stations, Maintenance & Parking Facilities																							
6 Dense Urban				Acre	\$	2,786,321																	
7 Urban				Acre	\$	1,371,510																	
8 Dense Suburban				Acre	\$	908,134																	
9 Suburban				Acre	\$	208,418																	
10 Undeveloped				Acre	\$	3,642																	
Environmental Mitigation = 3% Line Costs									3,371,744				9,580,472					6,423,032			12,052,721		
System Elements																							
1 Signaling (ATC)				Mile	\$	2,070,000		1.06	2,195,455		1.06	2,195,455		1.06	2,195,455				1.06	2,195,455			
2 Communications (w/ Fiber Optic Backbone)				Mile	\$	540,000		1.06	572,727		1.06	572,727		1.06	572,727				1.06	572,727			
3 Wayside Protection System				Mile	\$	108,000		1.06	114,545		1.06	114,545		1.06	114,545				1.06	114,545			
Electrification Items																							
1 Traction Power supply				Mile	\$	1,170,000		1.06	1,240,909		1.06	1,240,909		1.06	1,240,909				1.06	1,240,909			
2 Traction Power Distribution				Mile	\$	1,485,000		1.06	1,575,000		1.06	1,575,000		1.06	1,575,000				1.06	1,575,000			
Subtotal									121,461,859			334,628,172			226,222,730				419,508,730				
Program Implementation Costs (per screening)									30,972,774			85,330,184			57,686,796				106,974,726				
Program Implementation Costs																							
Contingencies (per screening) (25%)									30,365,465			83,657,043			56,555,682				104,877,182				
Subtotal									182,800,097			503,615,399			340,465,208				631,360,639				
Subtotal (Rounded)									183,000,000			504,000,000			340,000,000				631,000,000				



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (2 tracks)				Elevated Viaduct (4 tracks)				At-Grade (4 tracks)				Open Trench (2 tracks)			
Subsection 7			Base: 2009 (3rd	D2				D2				D2				D2				
				Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles		
Subsection Dedtails					Quant.	Cost		Quant.	Cost		Quant.	Cost		Quant.	Cost		Quant.	Cost		
Double Track At-Grade (Mile)					Start: 2245 + 00	End: 2270 + 00	0.47 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 2240 + 00	End: 2245 + 00	0.09 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2245 + 00	End: 2270 + 00	0.47 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2240 + 00	End: 2245 + 00	0.09 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total																				
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.47	\$	994,424			0.00	\$	-			0.00	\$	-	
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.09	\$	445,091			0.00	\$	-			0.00	\$	-	
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.00	\$	-	
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-			0.00	\$	-			0.57	\$	2,670,545	
Four Track Section - Total																				
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-			0.47	\$	1,988,848			0.57	\$	2,386,618	
	Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$	-			0.09	\$	890,182			0	\$	-	
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$	-			0.00	\$	-			0	\$	-	
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$	-			0.00	\$	-			0	\$	-	
Single Track - Total																				
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-	
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-	
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-	
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			0	\$	-			0	\$	-	
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-			0	\$	-			0	\$	-	
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-			0	\$	-			0	\$	-	
Earthwork Items																				
1	Site Preparation - Undeveloped	Acre	\$	9,216			4.48	\$	41,256			1.26	\$	11,636			0.00	\$	-	
2	Total Cut	CY	\$	6.45			0	\$	-			0	\$	-			0.00	\$	-	
3	Total Fill	CY	\$	6.29			0	\$	-			0	\$	-			0.00	\$	-	
4	Borrow	CY	\$	12.58			0.00	\$	-			0.00	\$	-			0.00	\$	-	
5	Spoil	CY	\$	12.58			0.00	\$	-			0.00	\$	-			0.00	\$	-	
6	Landscape erosion Control	Acre	\$	6,144			0.00	\$	-			0.00	\$	-			0.00	\$	-	
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-			0.47	\$	68,364			0.57	\$	82,036	
8	Special Drainage Facilities	5% Earthwork						\$	2,063				\$	4,000				\$	4,102	
Structures, Tunnels, Walls																				
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.09	\$	3,311,806			0.00	\$	-			0.00	\$	-	
	Standard Structure (4 tracks)	Mile	\$	52,459,008								0.09	\$	4,967,709			0.00	\$	-	
2	High Structure	Mile	\$	40,424,448				\$	-				\$	-				\$	-	
3	Long Span Structure	Mile	\$	61,919,232				\$	-				\$	-				\$	-	
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-				\$	-				\$	-	
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.02	\$	1,743,360			0.02	\$	1,743,360			0.01	\$	871,680	
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-				\$	-				\$	-	
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-				\$	-	
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-				\$	-				\$	-	
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$	-			0.00	\$	-			0	\$	-	
10	Double Track Mined (Soft Soil)	Mile	\$	174,231,030				\$	-				\$	-				\$	-	
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-				\$	-				\$	-	
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896				\$	-				\$	-				\$	-	
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-				\$	-				\$	-	
12	Crossovers	ea	\$	442,368				\$	-				\$	-				\$	-	
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080			0.00	\$	-			0.00	\$	-			0	\$	-	
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0.00	\$	-			0.00	\$	-			0.00 Miles	\$	-	
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336								0.00					0.00 Miles	\$	-	
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-				\$	-				\$	-	
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0.00	\$	-			0.00	\$	-			0	\$	-	
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$	-			0.00	\$	-			0	\$	-	
18	Containment Walls	Mile	\$	5,907,456			0.00	\$	-				\$	-			0.00	\$	-	
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-				\$	-				\$	-	
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-				\$	-				\$	-	
	Four Track Mined (Soft Soil)	Mile	\$	348,462,059				\$	-				\$	-				\$	-	
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624				\$	-				\$	-				\$	-	
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792				\$	-				\$	-				\$	-	
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			0.00	\$	-			0.00	\$	-	
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																
Grade Separations																				
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-				\$	-				\$	-	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			0	\$	-			0	\$	-			2	\$	39,853,056	
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	-				\$	-				\$	-	
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-				\$	-				\$	-	
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			0	\$	-			0	\$	-			0	\$	-	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-				\$	-				\$	-	



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (2 tracks)				Elevated Viaduct (4 tracks)				At-Grade (4 tracks)				Open Trench (2 tracks)			
Subsection 7			Base: 2009 (3rd		D2				D2				D2				D2			
					Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles	
							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Subsection Dedtails					Start: 2245 + 00	End: 2270 + 00	0.47 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track At-Grade (Mile)					Start: 2240 + 00	End: 2245 + 00	0.09 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles	
Double Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2245 + 00	End: 2270 + 00	0.47 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2240 + 00	End: 2245 + 00	0.09 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
1	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$ -				\$ -				\$ -				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$ -				\$ -				\$ -				\$ -
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$ -				\$ -				\$ -			1	1,398,784
8	Minor Crossing Closures	ea	\$	87,040				\$ -				\$ -				\$ -				\$ -
Building Items																				
1	Intermediate Passenger Stations	Each	\$	-				\$ -				\$ -				\$ -				\$ -
2	Terminal Passenger Stations	Each	\$	-				\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000			0	\$ -			1	\$ 15,000,000			1	\$ 15,000,000				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$ -				\$ -				\$ -				\$ -
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$ -				\$ -				\$ -			1	15,000,000
3	Maintenance Facility	Each	\$	-				\$ -				\$ -				\$ -				\$ -
4	Parking - Structures	space	\$	-				\$ -				\$ -				\$ -				\$ -
5	Parking - At Grade	space	\$	-				\$ -				\$ -				\$ -				\$ -
Rail & Utility Relocation																				
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -				\$ -				\$ -				\$ -
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$ -				\$ -				\$ -				\$ -
	Double Track Relocation (Permanent) - VTA LRT Cut and Cover Tunnel	Mile	\$	131,246,080				\$ -				\$ -				\$ -				\$ -
3	Single Track Removal	Mile	\$	130,048				\$ -				\$ -				\$ -				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$ -				\$ -				\$ -				\$ -
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$ -				\$ -				\$ -				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$ -				\$ -				\$ -				\$ -
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$ -				\$ -				\$ -				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$ -				\$ -				\$ -				\$ -
ROW (Not Included)																				
ROW required for each segment																				
1	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -				\$ -				\$ -
2	Urban	Acre	\$	1,371,510				\$ -				\$ -				\$ -				\$ -
3	Dense Suburban	Acre	\$	908,134				\$ -				\$ -				\$ -				\$ -
4	Suburban	Acre	\$	208,418				\$ -				\$ -				\$ -				\$ -
5	Undeveloped	Acre	\$	3,642				\$ -				\$ -				\$ -				\$ -
ROW required for Temp. Construction Easement																				
1	Dense Urban	Acre						\$ -				\$ -				\$ -				\$ -
2	Urban	Acre						\$ -				\$ -				\$ -				\$ -
3	Dense Suburban	Acre						\$ -				\$ -				\$ -				\$ -
4	Suburban	Acre						\$ -				\$ -				\$ -				\$ -
5	Undeveloped	Acre						\$ -				\$ -				\$ -				\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities																				
6	Dense Urban	Acre	\$	2,786,321				\$ -				\$ -				\$ -				\$ -
7	Urban	Acre	\$	1,371,510				\$ -				\$ -				\$ -				\$ -
8	Dense Suburban	Acre	\$	908,134				\$ -				\$ -				\$ -				\$ -
9	Suburban	Acre	\$	208,418				\$ -				\$ -				\$ -				\$ -
10	Undeveloped	Acre	\$	3,642				\$ -				\$ -				\$ -				\$ -
	Environmental Mitigation = 3% Line Costs							\$ 196,140				\$ 740,223				\$ 1,745,925				\$ 1,553,906
System Elements																				
1	Signaling (ATC)	Mile	\$	2,070,000			0.57	\$ 1,176,136			0.57	\$ 1,176,136			0.57	\$ 1,176,136			0.57	\$ 1,176,136
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.57	\$ 306,818			0.57	\$ 306,818			0.57	\$ 306,818			0.57	\$ 306,818
3	Wayside Protection System	Mile	\$	108,000			0.57	\$ 61,364			0.57	\$ 61,364			0.57	\$ 61,364			0.57	\$ 61,364
Electrification Items																				
1	Traction Power supply	Mile	\$	1,170,000			0.57	\$ 664,773			0.57	\$ 664,773			0.57	\$ 664,773			0.57	\$ 664,773
2	Traction Power Distribution	Mile	\$	1,485,000			0.57	\$ 843,750			0.57	\$ 843,750			0.57	\$ 843,750			0.57	\$ 843,750
Subtotal								\$ 9,786,981				\$ 28,467,163				\$ 62,996,258				\$ 56,403,614
Program Implementation Costs (per screening)								\$ 2,495,680				\$ 7,259,127				\$ 16,064,046				\$ 14,382,921
Program Implementation Costs																				
Contingencies (per screening) (25%)								\$ 2,446,745				\$ 7,116,791				\$ 15,749,065				\$ 14,100,903
Subtotal								\$ 14,729,407				\$ 42,843,081				\$ 94,809,368				\$ 84,887,438
Subtotal (Rounded)								\$ 15,000,000				\$ 43,000,000				\$ 95,000,000				\$ 85,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)						
Subsection 7				Base: 2009 (3rd	D2				D2				D2				D2						
					Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles				
Subsection Dedtails						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00			0.00 Miles
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 2240 + 00	End: 2270 + 00	0.57 Miles			Start: 2240 + 00	End: 2270 + 00		0.57 Miles
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 2240 + 00	End: 2270 + 00		0.57 Miles
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles			Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00		0.00 Miles
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 2240 + 00	End: 2270 + 00	0.57 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00		0.00 Miles
Four Track Trench (Mile)					Start: 2240 + 00	End: 2270 + 00	0.57 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00	0.00 Miles			Start: 0 + 00	End: 0 + 00		0.00 Miles
Double Track Section - Total																							
1 Double Track Section - At Grade	Mile	\$	2,100,224				0.00 \$	-				0 \$	-				0 \$	-		0.00 \$			
2 Double Track Section - On Structure	Mile	\$	4,700,160				0.00 \$	-				0 \$	-				0 \$	-		0.00 \$			
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				0.00 \$	-				0 \$	-				0.57 \$	2,670,545		0.57 \$			
4 Double Track Section - In Trench	Mile	\$	4,700,160				0.00 \$	-				0 \$	-				0 \$	-		0.57 \$			
				</																			



COST ELEMENTS			UNIT	UNIT PRICE	Open Trench (4 tracks)				Covered Trench (4 tracks)				Tunnel (2 tracks)				Hybrid (2 tracks over 2 tracks)						
Subsection 7			Base: 2009 (3rd	D2				D2				D2				D2							
				Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles		Start: 2240 + 00	End: 2270 + 00	0.57 Miles					
Subsection Dedtails					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost					
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles				Start: 2240 + 00	End: 2270 + 00	0.57 Miles				Start: 2240 + 00	End: 2270 + 00	0.57 Miles				
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 2240 + 00	End: 2270 + 00	0.57 Miles				
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles				Start: 0 + 00		0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00		0.00 Miles				
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 2240 + 00	End: 2270 + 00	0.57 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				
Four Track Trench (Mile)					Start: 2240 + 00	End: 2270 + 00	0.57 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				Start: 0 + 00	End: 0 + 00	0.00 Miles				
6	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$	-					\$	-					\$	-		
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-					\$	-					\$	-		
7	Street Bridging HSR Trench	ea	\$	1,398,784			1	\$	1,398,784					\$	-			1	\$	1,398,784			
8	Minor Crossing Closures	ea	\$	87,040				\$	-					\$	-					\$	-		
Building Items																							
1	Intermediate Passenger Stations	Each	\$	-				\$	-					\$	-					\$	-		
Terminal Passenger Stations																							
2	Terminal Passenger Stations	Each	\$	-				\$	-					\$	-					\$	-		
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$	-					\$	-					\$	-		
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-					\$	-					\$	-		
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-			1	\$	15,000,000			0	\$	-	\$	-		
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000			1	\$	15,000,000					\$	-		0	\$	-	\$	-		
3	Maintenance Facility	Each	\$	-				\$	-					\$	-					\$	-		
4	Parking - Structures	space	\$	-				\$	-					\$	-					\$	-		
5	Parking - At Grade	space	\$	-				\$	-					\$	-					\$	-		
Rail & Utility Relocation																							
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-					\$	-					\$	-		
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-					\$	-					\$	-		
	Double Track Relocation (Permanent) - VTA LRT Cut and Cover Tunnel	Mile	\$	131,246,080				\$	-					\$	-					\$	-		
3	Single Track Removal	Mile	\$	130,048				\$	-					\$	-					\$	-		
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-					\$	-					\$	-		
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-					\$	-					\$	-		
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-					\$	-					\$	-		
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-					\$	-					\$	-		
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-					\$	-					\$	-		
ROW (Not Included)																							
ROW required for each segment																							
1	Dense Urban	Acre	\$	2,786,321				\$	-					\$	-					\$	-		
2	Urban	Acre	\$	1,371,510				\$	-					\$	-					\$	-		
3	Dense Suburban	Acre	\$	908,134				\$	-					\$	-					\$	-		
4	Suburban	Acre	\$	208,418				\$	-					\$	-					\$	-		
5	Undeveloped	Acre	\$	3,642				\$	-					\$	-					\$	-		
ROW required for Temp. Construction Easement								\$	-					\$	-					\$	-		
1	Dense Urban	Acre						\$	-					\$	-					\$	-		
2	Urban	Acre						\$	-					\$	-					\$	-		
3	Dense Suburban	Acre						\$	-					\$	-					\$	-		
4	Suburban	Acre						\$	-					\$	-					\$	-		
5	Undeveloped	Acre						\$	-					\$	-					\$	-		
Right-of-Way Required for Stations, Maintenance & Parking Facilities								\$	-					\$	-					\$	-		
6	Dense Urban	Acre	\$	2,786,321				\$	-					\$	-					\$	-		
7	Urban	Acre	\$	1,371,510				\$	-					\$	-					\$	-		
8	Dense Suburban	Acre	\$	908,134				\$	-					\$	-					\$	-		
9	Suburban	Acre	\$	208,418				\$	-					\$	-					\$	-		
10	Undeveloped	Acre	\$	3,642				\$	-					\$	-					\$	-		
Environmental Mitigation = 3% Line Costs								\$	2,275,775					\$	5,582,396					\$	3,440,910		
System Elements																							
1	Signaling (ATC)	Mile	\$	2,070,000			0.57	\$	1,176,136				0.57	\$	1,176,136				0.57	\$	1,176,136		
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.57	\$	306,818				0.57	\$	306,818				0.57	\$	306,818		
3	Wayside Protection System	Mile	\$	108,000			0.57	\$	61,364				0.57	\$	61,364				0.57	\$	61,364		
Electrification Items																							
1	Traction Power supply	Mile	\$	1,170,000			0.57	\$	664,773				0.57	\$	664,773				0.57	\$	664,773		
2	Traction Power Distribution	Mile	\$	1,485,000			0.57	\$	843,750				0.57	\$	843,750				0.57	\$	843,750		
Subtotal								\$	81,187,771				\$	194,715,092					\$	121,190,748		\$	240,855,738
Program Implementation Costs (per screening)								\$	20,702,882				\$	49,652,349					\$	30,903,641		\$	61,418,213
Program Implementation Costs																							
Contingencies (per screening) (25%)								\$	20,296,943				\$	48,678,773					\$	30,297,687		\$	60,213,935
Subtotal								\$	122,187,596				\$	293,046,214					\$	182,392,076		\$	362,487,886
Subtotal (Rounded)								\$	122,000,000				\$	293,000,000					\$	182,000,000		\$	362,000,000



Subsection 8	8A1 (1.7 miles)			8A2 (4.7 miles)				8B (0.6 miles)				
	At Grade	Open Trench	Covered Trench/Tunnel	Aerial Viaduct (HST Only) - East Alignment	At Grade	Open Trench	Covered Trench/Tunnel	Aerial Viaduct (HST Only) - West Alignment	Aerial Viaduct (HST Only) - East Alignment	At Grade (HST Only)	Covered Trench/Tunnel (HST Only)	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$26	\$314	\$833	\$353 (2 tracks)	\$77	\$812	\$2,248	\$42 (2 tracks)	\$42 (2 tracks)	\$7 (2 tracks)	\$150 (2 tracks)	\$113 (2 tracks)
Acquisition Cost of Permanent ROW	Highest	Highest	Highest	Medium	Highest	Highest	Highest	Medium	Medium	Highest	Lowest	Lowest
Notes:	1. Portions of existing alignment are 4-track. 2. Caltrain Lawrence station.	1. Caltrain Lawrence station.	1. Caltrain Lawrence station.		1. Portions of existing alignment are 4-track.			1. East and West alignments have same overall length.	1. East and West alignments have same overall length.	1. Option only applies to West Alignment.	1. Option only applies to West Alignment.	1. Option only applies to West Alignment.



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (4 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)					
Subsection 8			Base: 2009 (3rd Quarter)	A1				A1				A1						
				Start: 2270 + 00	End: 2360 + 00	1.70 Miles		Start: 2270 + 00	End: 2360 + 00	1.70 Miles		Start: 2270 + 00	End: 2360 + 00	1.70 Miles				
Subsection Dedtails					Quant.	Cost			Quant.	Cost			Quant.	Cost				
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 2270 + 00	End: 2360 + 00	1.70 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2270 + 00	End: 2360 + 00	1.70 Miles		Start: 2270 + 00	End: 2360 + 00	1.70 Miles
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles		Start: 2270 + 00	End: 2360 + 00	1.70 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles
Double Track Section - Total																		
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00 \$	-			0.00 \$	-			0 \$	-		
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.00 \$	-			0.00 \$	-			0 \$	-		
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00 \$	-			0.00 \$	-			0 \$	-		
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00 \$	-			0.00 \$	-			0 \$	-		
Four Track Section - Total																		
	Four-track Section - At Grade	Mile	\$	4,200,448		1.70	\$	7,159,855			0.00 \$	-			0.00 \$	-		
	Four-Track Section - On Structure	Mile	\$	9,400,320			0.00 \$	-			0.00 \$	-			0.00 \$	-		
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00 \$	-			0.00 \$	-			1.70 \$	16,023,273		
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00 \$	-			1.70 \$	16,023,273			0.00 \$	-		
Single Track - Total																		
5	Single Track Section - At Grade	Mile	\$	1,549,312			0 \$	-			0 \$	-			0 \$	-		
6	Single Track Section - On structure	Mile	\$	2,350,080			0 \$	-			0 \$	-			0 \$	-		
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0 \$	-			0 \$	-			0 \$	-		
8	Single Track Section - In Trench	Mile	\$	2,350,080			0 \$	-			0 \$	-			0 \$	-		
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0 \$	-			0 \$	-			0 \$	-		
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0 \$	-			0 \$	-			0 \$	-		
Earthwork Items																		
1	Site Preparation - Undeveloped	Acre	\$	9,216		22.73	\$	209,455			22.73 \$	209,455			22.73 \$	209,455		
2	Total Cut	CY	\$	6.45			0 \$	-			733333.33 \$	4,730,880			1833333.33 \$	11,827,200		
3	Total Fill	CY	\$	6.29			0 \$	-			0.00 \$	-			1100000.00 \$	6,918,912		
4	Borrow	CY	\$	12.58			0 \$	-			0.00 \$	-			0.00 \$	-		
5	Spoil	CY	\$	12.58			0 \$	-			733333.33 \$	9,225,216			733333.33 \$	9,225,216		
6	Landscape erosion Control	Acre	\$	6,144		22.73	\$	139,636			22.73 \$	139,636			0.00 \$	-		
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384		1.70	\$	246,109			1.70 \$	246,109			0.00 \$	-		
8	Special Drainage Facilities	5% Earthwork					\$	29,760				\$	727,565			\$	1,409,039	
Structures, Tunnels, Walls																		
1	Standard Structure (2 tracks)	Mile	\$	34,972,672		0.00 Miles	\$	-			0.00 \$	-			0.00 \$	-		
	Standard Structure (4 tracks)	Mile	\$	52,459,008		0.00 Miles					0.00				0.00			
2	High Structure	Mile	\$	40,424,448			\$	-			\$	-			\$	-		
3	Long Span Structure	Mile	\$	61,919,232			\$	-			\$	-			\$	-		
4	Waterway Crossing - Primary	Mile	\$	85,342,208			\$	-			\$	-			\$	-		
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408		0.00	\$	-			0.00 \$	-			\$	-		
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264			\$	-			\$	-			\$	-		
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312			\$	-			\$	-			\$	-		
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896			\$	-			\$	-			\$	-		
9	Double Track Drill & Blast	Mile	\$	146,887,680		0	\$	-			0.00 \$	-			0.00 \$	-		
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000			\$	-			\$	-			\$	-		
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312														
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896														
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952			\$	-			\$	-			\$	-		
12	Crossovers	ea	\$	442,368			\$	-			\$	-			\$	-		
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080		0	\$	-			0.00 \$	-			0.00 \$	-		
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224		0.00 Miles	\$	-			0.00 \$	-			0.00 \$	-		
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336		0.00 Miles					1.70 \$	147,078,982			0.00			
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904			\$	-			\$	-			\$	-		
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856														
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			\$	-			0.00 \$	-			1.70 \$	20,196,655		
17	Retaining Walls	Mile	\$	8,613,888		0	\$	-			0.00 \$	-			0.00 \$	-		
18	Containment Walls	Mile	\$	5,907,456			\$	-			0.00 \$	-			\$	-		
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080			\$	-			\$	-			\$	-		
	Four Track Drill & Blast	Mile	\$	293,775,360			\$	-			\$	-			\$	-		
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000			\$	-			\$	-			\$	-		
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624														
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792														
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			\$	-			0.00 \$	-			1.70 \$	447,429,818		
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114														
Grade Separations																		
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352			\$	-			\$	-			\$	-		
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528			\$	-			\$	-			\$	-		
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680		0	\$	-			\$	-			\$	-		
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568			\$	-			\$	-			\$	-		
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520			\$	-			\$	-			\$	-		
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216			\$	-			\$	-			\$	-		



COST ELEMENTS			UNIT	UNIT PRICE	At-Grade (4 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)					
Subsection 8				Base: 2009 (3rd Quarter)	A1				A1				A1					
					Start: 2270 + 00	End: 2360 + 00	1.70 Miles		Start: 2270 + 00	End: 2360 + 00	1.70 Miles		Start: 2270 + 00	End: 2360 + 00	1.70 Miles			
Subsection Dedtails						Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)						0.00 Miles				0.00 Miles				0.00 Miles				
Double Track Elevated (Mile)						0.00 Miles				0.00 Miles				0.00 Miles				
Double Track Tunnel (Mile)						0.00 Miles				0.00 Miles				0.00 Miles				
Double Track Trench (Mile)						0.00 Miles				0.00 Miles				0.00 Miles				
Four Track Construction/Reconstruction At-Grade (Mile)						1.70 Miles				0.00 Miles				0.00 Miles				
Four Track Elevated (Mile)						0.00 Miles				0.00 Miles				0.00 Miles				
Four Track Tunnel (Mile)						0.00 Miles				0.00 Miles				0.00 Miles				
Four Track Trench (Mile)						0.00 Miles				0.00 Miles				0.00 Miles				
6 Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)				ea	\$	2,850,816	0 \$	-				\$	-		\$	-		
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)				ea	\$	3,171,328	\$	-				\$	-		\$	-		
7 Street Bridging HSR Trench				ea	\$	1,398,784	\$	-				\$	-		\$	-		
8 Minor Crossing Closures				ea	\$	87,040	\$	-				\$	-		\$	-		
Building Items																		
1 Intermediate Passenger Stations				Each	\$	-	\$	-				\$	-		\$	-		
2 Terminal Passenger Stations				Each	\$	-	\$	-				\$	-		\$	-		
Caltrain Passenger Station - At-Grade				Each	\$15,000,000	0	\$	-				\$	-		\$	-		
Caltrain Passenger Station - On Structure				Each	\$15,000,000		\$	-				\$	-		\$	-		
Caltrain Passenger Station - In Tunnel or Subway				Each	\$15,000,000		\$	-				\$	-	1	\$	15,000,000		
Caltrain Passenger Station - In Trench				Each	\$15,000,000		\$	-			1	\$	15,000,000		\$	-		
3 Maintenance Facility				Each	\$123,924,884		\$	-				\$	-		\$	-		
4 Parking - Structures				space	\$	-	\$	-				\$	-		\$	-		
5 Parking - At Grade				space	\$	-	\$	-				\$	-		\$	-		
Rail & Utility Relocation																		
1 Single Track Relocation (Temporary)				Mile	\$	2,000,896	\$	-				\$	-		\$	-		
2 Single Track Relocation (Permanent)				Mile	\$	2,000,896	\$	-				\$	-		\$	-		
3 Single Track Removal				Mile	\$	130,048	\$	-				\$	-		\$	-		
4 Major Utility Relocations - Dense Urban				Mile	\$	1,548,288	\$	-				\$	-		\$	-		
5 Major Utility Relocations - Urban				Mile	\$	1,084,416	\$	-				\$	-		\$	-		
6 Major Utility Relocations - Dense Suburban				Mile	\$	775,168	\$	-				\$	-		\$	-		
7 Major Utility Relocations - Suburban				Mile	\$	464,896	\$	-				\$	-		\$	-		
8 Major Utility Relocations - Undeveloped				Mile	\$	30,720	\$	-				\$	-		\$	-		
ROW (Not Included)																		
ROW required for each segment																		
1 Dense Urban				Acre	\$	2,786,321	\$	-				\$	-		\$	-		
2 Urban				Acre	\$	1,371,510	\$	-				\$	-		\$	-		
3 Dense Suburban				Acre	\$	908,134	\$	-				\$	-		\$	-		
4 Suburban				Acre	\$	208,418	\$	-				\$	-		\$	-		
5 Undeveloped				Acre	\$	3,642	\$	-				\$	-		\$	-		
ROW required for Temp. Construction Easement							\$	-				\$	-		\$	-		
1 Dense Urban				Acre			\$	-				\$	-		\$	-		
2 Urban				Acre			\$	-				\$	-		\$	-		
3 Dense Suburban				Acre			\$	-				\$	-		\$	-		
4 Suburban				Acre			\$	-				\$	-		\$	-		
5 Undeveloped				Acre			\$	-				\$	-		\$	-		
Right-of-Way Required for Stations, Maintenance & Parking Facilities							\$	-				\$	-		\$	-		
6 Dense Urban				Acre	\$	2,786,321	\$	-				\$	-		\$	-		
7 Urban				Acre	\$	1,371,510	\$	-				\$	-		\$	-		
8 Dense Suburban				Acre	\$	908,134	\$	-				\$	-		\$	-		
9 Suburban				Acre	\$	208,418	\$	-				\$	-		\$	-		
10 Undeveloped				Acre	\$	3,642	\$	-				\$	-		\$	-		
Environmental Mitigation = 3% Line Costs							\$	233,544				\$	5,801,433			\$	15,847,187	
System Elements																		
1 Signaling (ATC)				Mile	\$	2,070,000	1.70	\$	3,528,409			1.70	\$	3,528,409	1.70	\$	3,528,409	
2 Communications (w/ Fiber Optic Backbone)				Mile	\$	540,000	1.70	\$	920,455			1.70	\$	920,455	1.70	\$	920,455	
3 Wayside Protection System				Mile	\$	108,000	1.70	\$	184,091			1.70	\$	184,091	1.70	\$	184,091	
Electrification Items																		
1 Traction Power supply				Mile	\$	1,170,000	1.70	\$	1,994,318			1.70	\$	1,994,318	1.70	\$	1,994,318	
2 Traction Power Distribution				Mile	\$	1,485,000	1.70	\$	2,531,250			1.70	\$	2,531,250	1.70	\$	2,531,250	
Subtotal								\$	17,176,882				\$	208,341,072			\$	553,245,277
Program Implementation Costs (per screening)								\$	4,380,105				\$	53,126,973			\$	141,077,546
Program Implementation Costs																		
Contingencies (per screening) (25%)								\$	4,294,220				\$	52,085,268			\$	138,311,319
Subtotal								\$	25,851,207				\$	313,553,313			\$	832,634,142
Subtotal (Rounded)								\$	26,000,000				\$	314,000,000			\$	833,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (2 tracks) (HST only)				At-Grade (4 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)				
Subsection 8				Base: 2009 (3rd Quarter)	A2				A2				A2				A2				
					Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 2360 + 00	End: 2610 + 00	4.73 Miles		
Subsection Dedtails							Quant.	Cost			Quant.	Cost			Quant.	Cost					
Double Track At-Grade (Mile)					Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2360 + 00	End: 2610 + 00	4.73 Miles		
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Section - Total																					
1	Double Track Section - At Grade	Mile	\$	2,100,224			4.73	\$ 9,944,242			0.00	\$ -			0.00	\$ -			0	\$ -	
2	Double Track Section - On Structure	Mile	\$	4,700,160			4.73	\$ 22,254,545			0.00	\$ -			0.00	\$ -			0	\$ -	
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -			0	\$ -	
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$ -			0.00	\$ -			0.00	\$ -			0	\$ -	
Four Track Section - Total																					
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$ -			4.73	\$ 19,888,485			0.00	\$ -			0.00	\$ -	
	Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -	
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$ -			0.00	\$ -			0.00	\$ -			4.73	\$ 44,509,091	
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$ -			0.00	\$ -			4.73	\$ 44,509,091			0.00	\$ -	
Single Track - Total																					
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -			0	\$ -	
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -			0	\$ -	
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -			0	\$ -	
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$ -			0	\$ -			0	\$ -			0	\$ -	
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$ -			0	\$ -			0	\$ -			0	\$ -	
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$ -			0	\$ -			0	\$ -			0	\$ -	
Earthwork Items																					
1	Site Preparation - Undeveloped	Acre	\$	9,216			63.13	\$ 581,818			63.13	\$ 581,818			63.13	\$ 581,818			63.13	\$ 581,818	
2	Total Cut	CY	\$	6.45			0.00	\$ -			0	\$ -			2037037.04	\$ 13,141,333			5092592.59	\$ 32,853,333	
3	Total Fill	CY	\$	6.29				\$ -			0	\$ -			0.00	\$ -			3055555.56	\$ 19,219,200	
4	Borrow	CY	\$	12.58				\$ -			0	\$ -			0.00	\$ -			0.00	\$ -	
5	Spoil	CY	\$	12.58				\$ -			0	\$ -			2037037.04	\$ 25,625,600			2037037.04	\$ 25,625,600	
6	Landscape erosion Control	Acre	\$	6,144			63.13	\$ 387,879			63.13	\$ 387,879			63.13	\$ 387,879			0.00	\$ -	
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			4.73	\$ 683,636			4.73	\$ 683,636			4.73	\$ 683,636			0.00	\$ -	
8	Special Drainage Facilities	5% Earthwork						\$ 82,667				\$ 82,667				\$ 2,021,013				\$ 3,913,998	
Structures, Tunnels, Walls																					
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			4.73	\$ 165,590,303			0.00 Miles	\$ -			0.00	\$ -			0.00	\$ -	
	Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00				0.00 Miles				0.00				0.00		
2	High Structure	Mile	\$	40,424,448				\$ -				\$ -				\$ -				\$ -	
3	Long Span Structure	Mile	\$	61,919,232				\$ -				\$ -				\$ -				\$ -	
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$ -				\$ -				\$ -				\$ -	
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.04	\$ 3,486,720			0.04	\$ 3,486,720			0.04	\$ 3,486,720				\$ -	
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$ -				\$ -				\$ -				\$ -	
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$ -				\$ -				\$ -				\$ -	
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$ -				\$ -				\$ -				\$ -	
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$ -			0	\$ -			0.00	\$ -			0.00	\$ -	
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$ -				\$ -				\$ -				\$ -	
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312																	
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																	
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$ -				\$ -				\$ -				\$ -	
12	Crossovers	ea	\$	442,368				\$ -				\$ -				\$ -				\$ -	
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				\$ -			0	\$ -			0.00	\$ -			0.00	\$ -	
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0.00	\$ -			0.00 Miles	\$ -			0.00	\$ -			0.00	\$ -	
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336			0.00				0.00 Miles				4.73	\$ 408,552,727			0.00		
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$ -				\$ -				\$ -				\$ -	
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																	
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0.00	\$ -				\$ -			0.00	\$ -			4.73	\$ 56,101,818	
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$ -			0	\$ -			0.00	\$ -			0.00	\$ -	
18	Containment Walls	Mile	\$	5,907,456				\$ -				\$ -			0.00	\$ -				\$ -	
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$ -				\$ -				\$ -				\$ -	
	Four Track Drill & Blast	Mile	\$	293,775,360				\$ -				\$ -				\$ -				\$ -	
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$ -				\$ -				\$ -				\$ -	
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624																	
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792																	
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$ -				\$ -			0.00	\$ -			4.73	\$ 1,242,860,606	
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																	
Grade Separations																					
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$ -				\$ -				\$ -				\$ -	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$ -				\$ -				\$ -				\$ -	
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$ -				\$ -				\$ -				\$ -	
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$ -				\$ -				\$ -				\$ -	
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$ -				\$ -				\$ -				\$ -	



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (2 tracks) (HST only)				At-Grade (4 tracks)				Open Trench (4 tracks)				Covered Trench (4 tracks)				
Subsection 8				Base: 2009 (3rd Quarter)	A2				A2				A2				A2				
					Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 2360 + 00	End: 2610 + 00	4.73 Miles		
Subsection Dedtails						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost		
Double Track At-Grade (Mile)					Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2360 + 00	End: 2610 + 00	4.73 Miles		
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2360 + 00	End: 2610 + 00	4.73 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
6	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816																	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328																	
7	Street Bridging HSR Trench	ea	\$	1,398,784																	
8	Minor Crossing Closures	ea	\$	87,040																	
Building Items																					
1	Intermediate Passenger Stations	Each	\$	-																	
2	Terminal Passenger Stations	Each	\$	-																	
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000																	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000																	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000																	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000																	
3	Maintenance Facility	Each	\$	123,924,884																	
4	Parking - Structures	space	\$	-																	
5	Parking - At Grade	space	\$	-																	
Rail & Utility Relocation																					
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896																	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896																	
3	Single Track Removal	Mile	\$	130,048																	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288																	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416																	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168																	
7	Major Utility Relocations - Suburban	Mile	\$	464,896																	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720																	
ROW (Not Included)																					
ROW required for each segment																					
1	Dense Urban	Acre	\$	2,786,321																	
2	Urban	Acre	\$	1,371,510																	
3	Dense Suburban	Acre	\$	908,134																	
4	Suburban	Acre	\$	208,418																	
5	Undeveloped	Acre	\$	3,642																	
ROW required for Temp. Construction Easement																					
1	Dense Urban	Acre																			
2	Urban	Acre																			
3	Dense Suburban	Acre																			
4	Suburban	Acre																			
5	Undeveloped	Acre																			
Right-of-Way Required for Stations, Maintenance & Parking Facilities																					
6	Dense Urban	Acre	\$	2,786,321																	
7	Urban	Acre	\$	1,371,510																	
8	Dense Suburban	Acre	\$	908,134																	
9	Suburban	Acre	\$	208,418																	
10	Undeveloped	Acre	\$	3,642																	
Environmental Mitigation = 3% Line Costs							\$	6,090,354			\$	753,336			\$	14,969,695			\$	42,769,964	
System Elements																					
1	Signaling (ATC)	Mile	\$	2,070,000			4.73	\$	9,801,136		4.73	\$	9,801,136		4.73	\$	9,801,136		4.73	\$	9,801,136
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			4.73	\$	2,556,818		4.73	\$	2,556,818		4.73	\$	2,556,818		4.73	\$	2,556,818
3	Wayside Protection System	Mile	\$	108,000			4.73	\$	511,364		4.73	\$	511,364		4.73	\$	511,364		4.73	\$	511,364
Electrification Items																					
1	Traction Power supply	Mile	\$	1,170,000			4.73	\$	5,539,773		4.73	\$	5,539,773		4.73	\$	5,539,773		4.73	\$	5,539,773
2	Traction Power Distribution	Mile	\$	1,485,000			4.73	\$	7,031,250		4.73	\$	7,031,250		4.73	\$	7,031,250		4.73	\$	7,031,250
Subtotal								\$	234,542,506			\$	51,304,882			\$	539,399,854			\$	1,493,875,769
Program Implementation Costs (per screening)								\$	59,808,339			\$	13,082,745			\$	137,546,963			\$	380,938,321
Program Implementation Costs																					
Contingencies (per screening) (25%)								\$	58,635,627			\$	12,826,220			\$	134,849,963			\$	373,468,942
Subtotal								\$	352,986,472			\$	77,213,847			\$	811,796,780			\$	2,248,283,032
Subtotal (Rounded)								\$	353,000,000			\$	77,000,000			\$	812,000,000			\$	2,248,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (2 tracks) (HST only)				At-Grade (2 tracks) (HST only)				Covered Trench (2 tracks) (HST only)				Tunnel (2 tracks) (HST only)				
Subsection 8			Base: 2009 (3rd Quarter)	B				B				B				B					
				Start: 2610 + 00	End: 2640 + 00	0.57 Miles		Start: 2610 + 00	End: 2640 + 00	0.57 Miles		Start: 2610 + 00	End: 2640 + 00	0.57 Miles		Start: 2610 + 00	End: 2640 + 00	0.57 Miles			
					Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2610 + 00	End: 2640 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 2610 + 00	End: 2640 + 00	0.57 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2610 + 00	End: 2640 + 00	0.57 Miles		Start: 2610 + 00	End: 2640 + 00	0.57 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Section - Total																					
1	Double Track Section - At Grade	Mile	\$	2,100,224			0.00	\$	-		0.57	\$	1,193,309		0	\$	-		0.00	\$	-
2	Double Track Section - On Structure	Mile	\$	4,700,160			0.57	\$	2,670,545		0.00	\$	-		0	\$	-		0.00	\$	-
3	Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160			0.00	\$	-		0.00	\$	-		0.57	\$	2,670,545		0.57	\$	2,670,545
4	Double Track Section - In Trench	Mile	\$	4,700,160			0.00	\$	-			\$	-		0	\$	-		0.00	\$	-
Four Track Section - Total																					
	Four-track Section - At Grade	Mile	\$	4,200,448			0.00	\$	-		0	\$	-		0.00	\$	-		0.00	\$	-
	Four-Track Section - On Structure	Mile	\$	9,400,320			0.00	\$	-		0	\$	-		0.00	\$	-		0.00	\$	-
	Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Four-Track Section - In Trench	Mile	\$	9,400,320			0.00	\$	-			\$	-		0.00	\$	-		0.00	\$	-
Single Track - Total																					
5	Single Track Section - At Grade	Mile	\$	1,549,312			0	\$	-		0	\$	-		0	\$	-		0	\$	-
6	Single Track Section - On structure	Mile	\$	2,350,080			0	\$	-		0	\$	-		0	\$	-		0	\$	-
7	Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080			0	\$	-		0	\$	-		0	\$	-		0	\$	-
8	Single Track Section - In Trench	Mile	\$	2,350,080			0	\$	-			\$	-		0	\$	-		0	\$	-
9	Freight Double Track - At Grade	Mile	\$	2,839,552			0	\$	-		0	\$	-		0	\$	-		0	\$	-
10	Freight Single Track - At Grade	Mile	\$	1,549,312			0	\$	-		0	\$	-		0	\$	-		0	\$	-
Earthwork Items																					
1	Site Preparation - Undeveloped	Acre	\$	9,216			7.58	\$	69,818		7.58	\$	69,818		0.00	\$	-		0.00	\$	-
2	Total Cut	CY	\$	6.45			0.00	\$	-		0.00	\$	-		611111.11	\$	3,942,400		0.00	\$	-
3	Total Fill	CY	\$	6.29				\$	-			\$	-		366666.67	\$	2,306,304		0.00	\$	-
4	Borrow	CY	\$	12.58				\$	-			\$	-		0.00	\$	-		0.00	\$	-
5	Spoil	CY	\$	12.58				\$	-			\$	-		244444.44	\$	3,075,072		0.00	\$	-
6	Landscape erosion Control	Acre	\$	6,144			7.58	\$	46,545		7.58	\$	46,545		0.00	\$	-		0.00	\$	-
7	Security Fencing (Both sides of ROW)	Mile	\$	144,384			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
8	Special Drainage Facilities	5% Earthwork						\$	5,818			\$	5,818			\$	466,189			\$	-
Structures, Tunnels, Walls																					
1	Standard Structure (2 tracks)	Mile	\$	34,972,672			0.57	\$	19,870,836		0.00 Miles	\$	-		0.00	\$	-		0.00 Miles	\$	-
	Standard Structure (4 tracks)	Mile	\$	52,459,008			0.00				0.00 Miles				0.00				0.00 Miles		
2	High Structure	Mile	\$	40,424,448				\$	-			\$	-			\$	-			\$	-
3	Long Span Structure	Mile	\$	61,919,232				\$	-			\$	-			\$	-			\$	-
4	Waterway Crossing - Primary	Mile	\$	85,342,208				\$	-			\$	-			\$	-			\$	-
5	Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408			0.02	\$	1,743,360			\$	-			\$	-			\$	-
6	Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264				\$	-			\$	-			\$	-			\$	-
7	Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				\$	-			\$	-			\$	-		0.57 Miles	\$	60,589,382
8	Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896				\$	-			\$	-			\$	-			\$	-
9	Double Track Drill & Blast	Mile	\$	146,887,680			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
10	Double Track Mined (Soft Soil)	Mile	\$	79,200,000				\$	-			\$	-			\$	-			\$	-
	Double Track TBM (<6 Miles)	Mile	\$	106,637,312																	
	Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896																	
11	Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952				\$	-			\$	-			\$	-			\$	-
12	Crossovers	ea	\$	442,368				\$	-			\$	-			\$	-			\$	-
13	Cut & Cover Double Track Tunnel	Mile	\$	131,246,080				\$	-			\$	-		0.57	\$	74,571,636			\$	-
14	Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
	Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336			0.00				0.00				0.00				0.00		
15	Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904				\$	-			\$	-			\$	-			\$	-
	Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856																	
16	Mechanical & Electrical for Tunnels	Mile	\$	11,848,704			0.00	\$	-			\$	-		0.57	\$	6,732,218		0.57	\$	6,732,218
17	Retaining Walls	Mile	\$	8,613,888			0.00	\$	-		0.00	\$	-		0.00	\$	-		0.00	\$	-
18	Containment Walls	Mile	\$	5,907,456				\$	-			\$	-			\$	-			\$	-
19	Single Track Cut and Cover Subway	Mile	\$	131,246,080				\$	-			\$	-			\$	-			\$	-
	Four Track Drill & Blast	Mile	\$	293,775,360				\$	-			\$	-			\$	-			\$	-
	Four Track Mined (Soft Soil)	Mile	\$	158,400,000				\$	-			\$	-			\$	-		0.00 Miles	\$	-
	Four Track TBM (<6 Miles)	Mile	\$	213,274,624															0	\$	-
	Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792																\$	-
	Four Track Cut & Cover Tunnel	Mile	\$	262,492,160			0.00	\$	-			\$	-		0.00	\$	-		0.00	\$	-
	Double Deck with Double Track Cut and Cover Box	Mile	\$	328,521,114																	
Grade Separations																					
1	Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352				\$	-			\$	-			\$	-			\$	-
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$	-			\$	-			\$	-			\$	-
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	-		0	\$	-			\$	-			\$	-
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,																	



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (2 tracks) (HST only)				At-Grade (2 tracks) (HST only)				Covered Trench (2 tracks) (HST only)				Tunnel (2 tracks) (HST only)					
Subsection 8				Base: 2009 (3rd Quarter)	B				B				B				B					
					Start: 2610 + 00	End: 2640 + 00	0.57 Miles		Start: 2610 + 00	End: 2640 + 00	0.57 Miles		Start: 2610 + 00	End: 2640 + 00	0.57 Miles		Start: 2610 + 00	End: 2640 + 00	0.57 Miles			
Subsection Dedtails						Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost			
Double Track At-Grade (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2610 + 00	End: 2640 + 00	0.57 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)						Start: 2610 + 00	End: 2640 + 00	0.57 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Double Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2610 + 00	End: 2640 + 00	0.57 Miles		Start: 2610 + 00	End: 2640 + 00	0.57 Miles		
Double Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Elevated (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		
Four Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		
6	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816						0	\$	-								\$	-	
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328							\$	-								\$	-	
7	Street Bridging HSR Trench	ea	\$	1,398,784							\$	-								\$	-	
8	Minor Crossing Closures	ea	\$	87,040							\$	-								\$	-	
Building Items																						
1	Intermediate Passenger Stations	Each	\$	-				\$	-		\$	-				\$	-			\$	-	
2 Terminal Passenger Stations				Each	\$	-		\$	-		\$	-				\$	-			\$	-	
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$	-		\$	-				\$	-			\$	-	
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-		\$	-				\$	-			\$	-	
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-		\$	-			0	\$	-			\$	-	
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-		\$	-				\$	-			\$	-	
3	Maintenance Facility	Each	\$	123,924,884				\$	-		\$	-				\$	-			\$	-	
4	Parking - Structures	space	\$	-				\$	-		\$	-				\$	-			\$	-	
5	Parking - At Grade	space	\$	-				\$	-		\$	-				\$	-			\$	-	
Rail & Utility Relocation																						
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-		\$	-				\$	-			\$	-	
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-		\$	-				\$	-			\$	-	
3 Single Track Removal				Mile	\$	130,048		\$	-		\$	-				\$	-			\$	-	
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-		\$	-				\$	-			\$	-	
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-		\$	-				\$	-			\$	-	
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-		\$	-				\$	-			\$	-	
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-		\$	-				\$	-			\$	-	
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-		\$	-				\$	-			\$	-	
ROW (Not Included)																						
ROW required for each segment																						
1	Dense Urban	Acre	\$	2,786,321				\$	-		\$	-				\$	-			\$	-	
2	Urban	Acre	\$	1,371,510				\$	-		\$	-				\$	-			\$	-	
3	Dense Suburban	Acre	\$	908,134				\$	-		\$	-				\$	-			\$	-	
4	Suburban	Acre	\$	208,418				\$	-		\$	-				\$	-			\$	-	
5	Undeveloped	Acre	\$	3,642				\$	-		\$	-				\$	-			\$	-	
ROW required for Temp. Construction Easement																						
1	Dense Urban	Acre						\$	-		\$	-								\$	-	
2	Urban	Acre						\$	-		\$	-								\$	-	
3	Dense Suburban	Acre						\$	-		\$	-								\$	-	
4	Suburban	Acre						\$	-		\$	-								\$	-	
5	Undeveloped	Acre						\$	-		\$	-								\$	-	
Right-of-Way Required for Stations, Maintenance & Parking Facilities																						
6	Dense Urban	Acre	\$	2,786,321				\$	-		\$	-				\$	-			\$	-	
7	Urban	Acre	\$	1,371,510				\$	-		\$	-				\$	-			\$	-	
8	Dense Suburban	Acre	\$	908,134				\$	-		\$	-				\$	-			\$	-	
9	Suburban	Acre	\$	208,418				\$	-		\$	-				\$	-			\$	-	
10	Undeveloped	Acre	\$	3,642				\$	-		\$	-				\$	-			\$	-	
Environmental Mitigation = 3% Line Costs								\$	732,208			\$	39,465				\$	2,812,931			\$	2,099,764
System Elements																						
1	Signaling (ATC)	Mile	\$	2,070,000				0.57	\$	1,176,136		0.57	\$	1,176,136		0.57	\$	1,176,136		0.57	\$	1,176,136
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000				0.57	\$	306,818		0.57	\$	306,818		0.57	\$	306,818		0.57	\$	306,818
3	Wayside Protection System	Mile	\$	108,000				0.57	\$	61,364		0.57	\$	61,364		0.57	\$	61,364		0.57	\$	61,364
Electrification Items																						
1	Traction Power supply	Mile	\$	1,170,000				0.57	\$	664,773		0.57	\$	664,773		0.57	\$	664,773		0.57	\$	664,773
2	Traction Power Distribution	Mile	\$	1,485,000				0.57	\$	843,750		0.57	\$	843,750		0.57	\$	843,750		0.57	\$	843,750
Subtotal								\$	28,191,972			\$	4,407,797				\$	99,630,137			\$	75,144,751
Program Implementation Costs (per screening)								\$	7,188,953			\$	1,123,988				\$	25,405,685			\$	19,161,911
Program Implementation Costs																						
Contingencies (per screening) (25%)								\$	7,047,993			\$	1,101,949				\$	24,907,534			\$	18,786,188
Subtotal								\$	42,428,918			\$	6,633,734				\$	149,943,356			\$	113,092,850
Subtotal (Rounded)								\$	42,000,000			\$	7,000,000				\$	150,000,000			\$	113,000,000



Subsection 9(a)	9(a)A (2.3 miles)					9(a)B (0.9 miles)	
	Aerial Viaduct (HST Only) - West Alignment	Aerial Viaduct (HST Only) - East Alignment	At Grade (HST Only)	Covered Trench/Tunnel (HST Only)	Deep Tunnel (HST Only)	Aerial Viaduct (HST Only) - West Alignment	Aerial Viaduct (HST Only) - East Alignment
Capital Cost (\$2009 in Millions) does not include ROW	\$158 (2 tracks)	\$158 (2 tracks)	\$55 (2 tracks)	\$592 (2 tracks)	\$483 (2 tracks)	\$248 (2 tracks)	\$248 (2 tracks)
Acquisition Cost of Permanent ROW	Medium	Medium	Highest	Lowest	Lowest	Medium	Medium
Notes:	1. East and West alignments have same overall length.	1. East and West alignments have same overall length.	1. Caltrain Santa Clara station reconstructed to allow for 2 HST tracks. 2. Convert Hedding St to an underpass. 3. Option only applies to West Alignment.	1. Caltrain Santa Clara station reconstructed to allow for 2 HST tracks. 2. Option only applies to West Alignment.	1. Option only applies to West Alignment.	1. HST San Jose station.	1. HST San Jose station.



COST ELEMENTS			UNIT	UNIT PRICE	Elevated Viaduct (2 tracks) (HST only)				At-Grade (2 tracks) (HST only)				Covered Trench (2 tracks) (HST only)				Tunnel (2 tracks) (HST only)			
Subsection 9 (a)				Base: 2009 (3rd Quarter)	A				A				A				A			
					Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles	
Subsection Details							Quant.	Cost			Quant.	Cost			Quant.	Cost			Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total							0	\$ -			2.27	\$ 4,773,236			0.00	\$ -			0.00	\$ -
1 Double Track Section - At Grade				Mile				\$ -				\$ -				\$ -				\$ -
2 Double Track Section - On Structure				Mile			2.27	\$ 10,682,182				\$ -			0.00	\$ -			0.00	\$ -
3 Double Track Section - In Tunnel or Subway				Mile			0	\$ -				\$ -			2.27	\$ 10,682,182			2.27	\$ 10,682,182
4 Double Track Section - In Trench				Mile			0	\$ -				\$ -			0.00	\$ -			0.00	\$ -
Four Track Section - Total							0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
Four-track Section - At Grade				Mile				\$ -				\$ -				\$ -				\$ -
Four-Track Section - On Structure				Mile				\$ -				\$ -				\$ -				\$ -
Four-Track Section - In Tunnel or Subway				Mile				\$ -				\$ -				\$ -				\$ -
Four-Track Section - In Trench				Mile				\$ -				\$ -				\$ -				\$ -
Single Track - Total							0	\$ -			0	\$ -			0	\$ -			0	\$ -
5 Single Track Section - At Grade				Mile				\$ -				\$ -				\$ -				\$ -
6 Single Track Section - On structure				Mile				\$ -				\$ -				\$ -				\$ -
7 Single Track Section - In Tunnel or Subway				Mile				\$ -				\$ -				\$ -				\$ -
8 Single Track Section - In Trench				Mile				\$ -				\$ -				\$ -				\$ -
9 Freight Double Track - At Grade				Mile				\$ -				\$ -				\$ -				\$ -
10 Freight Single Track - At Grade				Mile				\$ -				\$ -				\$ -				\$ -
Earthwork Items																				
1 Site Preparation - Undeveloped				Acre	\$ 9,216		17.91	\$ 165,025			17.91	\$ 165,025			17.91	\$ 165,025			0.00	\$ -
2 Total Cut				CY	\$ 6.45		0.00	\$ -			0.00	\$ -			115555.56	\$ 7,454,720			977777.78	\$ 6,307,840
3 Total Fill				CY	\$ 6.29		0.00	\$ -			0.00	\$ -			577777.78	\$ 3,634,176			0.00	\$ -
4 Borrow				CY	\$ 12.58		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
5 Spoil				CY	\$ 12.58		0.00	\$ -			0.00	\$ -			577777.78	\$ 7,268,352			977777.78	\$ 12,300,288
6 Landscape erosion Control				Acre	\$ 6,144		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
7 Security Fencing (Both sides of ROW)				Mile	\$ 144,384		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
8 Special Drainage Facilities				5% Earthwork			\$ 8,251				\$ 8,251				\$ 926,114				\$ 930,406	
Structures, Tunnels, Walls																				
1 Standard Structure (2 tracks)				Mile	\$ 34,972,672		2.27	\$ 79,483,345			0.00	\$ -			0.00 Miles	\$ -			0.00 Miles	\$ -
Standard Structure (4 tracks)				Mile	\$ 52,459,008		0.00				0.00				0.00 Miles				0.00 Miles	
2 High Structure				Mile	\$ 40,424,448			\$ -				\$ -				\$ -				\$ -
3 Long Span Structure				Mile	\$ 61,919,232			\$ -				\$ -				\$ -				\$ -
4 Waterway Crossing - Primary				Mile	\$ 85,342,208			\$ -				\$ -				\$ -				\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)				Mile	\$ 92,049,408			\$ -			0.01	\$ 871,680				\$ -				\$ -
6 Twin Single Track Drill&Blast (<6 Miles)				Mile	\$ 142,731,264			\$ -				\$ -				\$ -				\$ -
7 Twin Single Track TBM (<6 Miles)				Mile	\$ 106,637,312			\$ -				\$ -				\$ -			2.27 Miles	\$ 242,357,527
8 Twin Single Track TBM w/3rd Tube (<6 Miles)				Mile	\$ 176,720,896			\$ -				\$ -				\$ -				\$ -
9 Double Track Drill & Blast				Mile	\$ 146,887,680		0.00	\$ -			0.00	\$ -				\$ -				\$ -
10 Double Track Mined (Soft Soil)				Mile	\$ 79,200,000			\$ -				\$ -				\$ -			0.00	\$ -
Double Track TBM (<6 Miles)				Mile	\$ 106,637,312															\$ -
Double Track TBM w/3rd Tube (>6 Miles)				Mile	\$ 176,720,896															\$ -
11 Seismic Chamber (Drill & Blast/Mined)				ea	\$ 126,205,952			\$ -				\$ -				\$ -				\$ -
12 Crossovers				ea	\$ 442,368			\$ -				\$ -				\$ -				\$ -
13 Cut & Cover Double Track Tunnel				Mile	\$ 131,246,080		0.00	\$ -			0.00	\$ -			2.27	\$ 298,286,545				\$ -
14 Trench Long (2 tracks) (1000 ft+)				Mile	\$ 57,524,224		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
Trench Long (4 tracks) (1000 ft+)				Mile	\$ 86,286,336		0.00				0.00				0.00				0.00	
15 Trench Short (2 tracks) (<1000 ft)				Mile	\$ 78,843,904			\$ -				\$ -				\$ -				\$ -
Trench Short (4 tracks) (<1000 ft)				Mile	\$ 118,265,856															
16 Mechanical & Electrical for Tunnels				Mile	\$ 11,848,704		0.00	\$ -			0.00	\$ -			2.27	\$ 26,928,873			2.27	\$ 26,928,873
17 Retaining Walls				Mile	\$ 8,613,888		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
18 Containment Walls				Mile	\$ 5,907,456			\$ -				\$ -				\$ -				\$ -
19 Single Track Cut and Cover Subway				Mile	\$ 131,246,080			\$ -				\$ -				\$ -				\$ -
Four Track Drill & Blast				Mile	\$ 293,775,360			\$ -				\$ -				\$ -				\$ -
Four Track Mined (Soft Soil)				Mile	\$ 158,400,000			\$ -				\$ -				\$ -			0.00	\$ -
Four Track TBM (<6 Miles)				Mile	\$ 213,274,624														0.00	\$ -
Four Track TBM w/3rd Tube (>6 Miles)				Mile	\$ 353,441,792															\$ -
Four Track Cut & Cover Tunnel				Mile	\$ 262,492,160		0.00	\$ -			0.00	\$ -			0.00	\$ -			0.00	\$ -
Double Deck with Double Track Cut and Cover Box				Mile	\$ 328,521,114															
Grade Separations																				
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)				ea	\$ 13,284,352			\$ -				\$ -				\$ -				\$ -



COST ELEMENTS				UNIT	UNIT PRICE	Elevated Viaduct (2 tracks) (HST only)				At-Grade (2 tracks) (HST only)				Covered Trench (2 tracks) (HST only)				Tunnel (2 tracks) (HST only)							
Subsection 9 (a)					Base: 2009 (3rd Quarter)	A				A				A				A							
						Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles					
Subsection Dedtails						Start: 0 + 00	End: 0 + 00	Quant.	Cost	Start: 2640 + 00	End: 2760 + 00	Quant.	Cost	Start: 0 + 00	End: 0 + 00	Quant.	Cost	Start: 0 + 00	End: 0 + 00	Quant.	Cost				
Double Track At-Grade (Mile)						Start: 2640 + 00	End: 2760 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Double Track Elevated (Mile)						Start: 0 + 00		0.00 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles		Start: 0 + 00		0.00 Miles		Start: 2640 + 00	End: 2760 + 00	2.27 Miles					
Double Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Double Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles					
Four Track Construction/Reconstruction At-Grade (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Four Track Elevated (Mile)						Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles					
Four Track Tunnel (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles					
Four Track Trench (Mile)						Start: 0 + 00		0.00 Miles		Start: 0 + 00		0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles		Start: 0 + 00	End: 0 + 00	0.00 Miles					
2	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528				\$	-			1	\$	2,759,680				\$	-			\$	-		
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680				\$	-									\$	-			\$	-		
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568				\$	-									\$	-			\$	-		
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				\$	-			0	\$	-			0	\$	-			0	\$	-	
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216				\$	-									\$	-			\$	-		
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816				\$	-									\$	-			\$	-		
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328				\$	-									\$	-			\$	-		
7	Street Bridging HSR Trench	ea	\$	1,398,784				\$	-									\$	-			\$	-		
8	Minor Crossing Closures	ea	\$	87,040				\$	-									\$	-			\$	-		
Building Items																									
1	Intermediate Passenger Stations	Each	\$	-				\$	-									\$	-			\$	-		
2	Terminal Passenger Stations	Each	\$	-				\$	-									\$	-			\$	-		
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000			0	\$	-			1	\$	15,000,000				\$	-			\$	-		
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$	-									\$	-			\$	-		
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$	-						1	\$	15,000,000					\$	-		
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000				\$	-								0	\$	-			\$	-		
3	Maintenance Facility	Each	\$	123,921,884				\$	-									\$	-			\$	-		
4	Parking - Structures	space	\$	-				\$	-									\$	-			\$	-		
5	Parking - At Grade	space	\$	-				\$	-									\$	-			\$	-		
Rail & Utility Relocation																									
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$	-									\$	-			\$	-		
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$	-									\$	-			\$	-		
3	Single Track Removal	Mile	\$	130,048				\$	-									\$	-			\$	-		
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$	-									\$	-			\$	-		
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$	-									\$	-			\$	-		
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$	-									\$	-			\$	-		
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$	-									\$	-			\$	-		
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$	-									\$	-			\$	-		
ROW (Not Included)																									
ROW required for each segment																									
1	Dense Urban	Acre	\$	2,786,321				\$	-									\$	-			\$	-		
2	Urban	Acre	\$	1,371,510				\$	-									\$	-			\$	-		
3	Dense Suburban	Acre	\$	908,134				\$	-									\$	-			\$	-		
4	Suburban	Acre	\$	208,418				\$	-									\$	-			\$	-		
5	Undeveloped	Acre	\$	3,642				\$	-									\$	-			\$	-		
ROW required for Temp. Construction Easement																									
1	Dense Urban	Acre						\$	-									\$	-			\$	-		
2	Urban	Acre						\$	-									\$	-			\$	-		
3	Dense Suburban	Acre						\$	-									\$	-			\$	-		
4	Suburban	Acre						\$	-									\$	-			\$	-		
5	Undeveloped	Acre						\$	-									\$	-			\$	-		
Right-of-Way Required for Stations, Maintenance & Parking Facilities																									
6	Dense Urban	Acre	\$	2,786,321				\$	-									\$	-			\$	-		
7	Urban	Acre	\$	1,371,510				\$	-									\$	-			\$	-		
8	Dense Suburban	Acre	\$	908,134				\$	-									\$	-			\$	-		
9	Suburban	Acre	\$	208,418				\$	-									\$	-			\$	-		
10	Undeveloped	Acre	\$	3,642				\$	-									\$	-			\$	-		
	Environmental Mitigation = 3% Line Costs							\$	2,710,164					\$	707,336				\$	11,110,380				\$	8,985,213
System Elements																									
1	Signaling (ATC)	Mile	\$	2,070,000			2.27	\$	4,704,545			2.27	\$	4,704,545			2.27	\$	4,704,545			2.27	\$	4,704,545	
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			2.27	\$	1,227,273			2.27	\$	1,227,273			2.27	\$	1,227,273			2.27	\$	1,227,273	
3	Wayside Protection System	Mile	\$	108,000			2.27	\$	245,455			2.27	\$	245,455			2.27	\$	245,455			2.27	\$	245,455	
Electrification Items																									
1	Traction Power supply	Mile	\$	1,170,000			2.27	\$	2,659,091			2.27	\$	2,659,091			2.27	\$	2,659,091			2.27	\$	2,659,091	
2	Traction Power Distribution	Mile	\$	1,485,000			2.27	\$	3,375,000			2.27	\$	3,375,000			2.27	\$	3,375,000			2.27	\$	3,375,000	
Subtotal								\$	105,260,331				\$	36,496,572				\$	393,667,730				\$	320,703,693	
Program Implementation Costs (per screening)								\$	26,841,384				\$	9,306,626				\$	100,385,271				\$	81,779,442	
Program Implementation Costs																									
Contingencies (per screening) (25%)								\$	26,315,083				\$	9,124,143				\$	98,416,932				\$	80,175,923	
Subtotal								\$	158,416,798				\$	54,927,341				\$	592,469,933				\$	482,659,058	
Subtotal (Rounded)								\$	158,000,000				\$	55,000,000				\$	592,000,000				\$	483,000,000	



COST ELEMENTS				UNIT	UNIT PRICE	Elevated Viaduct (2 tracks)			
Subsection 9 (a)					Base: 2009 (3rd Quarter)	B			
						Start: 2760 + 00	End: 2808 + 00	0.91 Miles	
Subsection Dedtails							Quant.	Cost	
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		
Double Track Elevated (Mile)					Start: 2760 + 00	End: 2808 + 00	0.91 Miles		
Double Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles		
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles		
Four Track Elevated (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles		
Four Track Tunnel (Mile)					Start: 0 + 00		0.00 Miles		
Four Track Trench (Mile)					Start: 0 + 00		0.00 Miles		
Double Track Section - Total									
1 Double Track Section - At Grade					Mile	\$	2,100,224	0.00 \$	
2 Double Track Section - On Structure					Mile	\$	4,700,160	0.91 \$	4,272,873
3 Double Track Section - In Tunnel or Subway					Mile	\$	4,700,160	0.00 \$	-
4 Double Track Section - In Trench					Mile	\$	4,700,160	0.00 \$	-
Four Track Section - Total									
Four-Track Section - At Grade					Mile	\$	4,200,448	0.00 \$	-
Four-Track Section - On Structure					Mile	\$	9,400,320	0.00 \$	-
Four-Track Section - In Tunnel or Subway					Mile	\$	9,400,320	0.00 \$	-
Four-Track Section - In Trench					Mile	\$	9,400,320	0.00 \$	-
Single Track - Total									
5 Single Track Section - At Grade					Mile	\$	1,549,312	0 \$	-
6 Single Track Section - On structure					Mile	\$	2,350,080	0 \$	-
7 Single Track Section - In Tunnel or Subway					Mile	\$	2,350,080	0 \$	-
8 Single Track Section - In Trench					Mile	\$	2,350,080	0 \$	-
9 Freight Double Track - At Grade					Mile	\$	2,839,552	0 \$	-
10 Freight Single Track - At Grade					Mile	\$	1,549,312	0 \$	-
Earthwork Items									
1 Site Preparation - Undeveloped					Acre	\$	9,216	7.16 \$	66,010
2 Total Cut					CY	\$	6.45	0 \$	-
3 Total Fill					CY	\$	6.29	0 \$	-
4 Borrow					CY	\$	12.58	0.00 \$	-
5 Spoil					CY	\$	12.58	0.00 \$	-
6 Landscape erosion Control					Acre	\$	6,144	0.00 \$	-
7 Security Fencing (Both sides of ROW)					Mile	\$	144,384	0.00 \$	-
8 Special Drainage Facilities					5% Earthwork			\$	3,300
Structures, Tunnels, Walls									
1 Standard Structure (2 tracks)					Mile	\$	34,972,672	0.91 \$	31,793,338
Standard Structure (4 tracks)					Mile	\$	52,459,008	0.00	
2 High Structure					Mile	\$	40,424,448	\$	-
3 Long Span Structure					Mile	\$	61,919,232	\$	-
4 Waterway Crossing - Primary					Mile	\$	85,342,208	\$	-
5 Waterway Crossing - Secondary (Irrigation Canal)					Mile	\$	92,049,408	\$	-
6 Twin Single Track Drill&Blast (<6 Miles)					Mile	\$	142,731,264	\$	-
7 Twin Single Track TBM (<6 Miles)					Mile	\$	106,637,312	\$	-
8 Twin Single Track TBM w/3rd Tube (<6 Miles)					Mile	\$	176,720,896	\$	-
9 Double Track Drill & Blast					Mile	\$	146,887,680	0 \$	-
10 Double Track Mined (Soft Soil)					Mile	\$	79,200,000	\$	-
Double Track TBM (<6 Miles)					Mile	\$	106,637,312		
Double Track TBM w/3rd Tube (>6 Miles)					Mile	\$	176,720,896		
11 Seismic Chamber (Drill & Blast/Mined)					ea	\$	126,205,952	\$	-
12 Crossovers					ea	\$	442,368	\$	-
13 Cut & Cover Double Track Tunnel					Mile	\$	131,246,080	0 \$	-
14 Trench Long (2 tracks) (1000 ft+)					Mile	\$	57,524,224	0.00 Miles \$	-
Trench Long (4 tracks) (1000 ft+)					Mile	\$	86,286,336	0.00 Miles	
15 Trench Short (2 tracks) (<1000 ft)					Mile	\$	78,843,904	\$	-
Trench Short (4 tracks) (<1000 ft)					Mile	\$	118,265,856		
16 Mechanical & Electrical for Tunnels					Mile	\$	11,848,704	0 \$	-
17 Retaining Walls					Mile	\$	8,613,888	0 \$	-
18 Containment Walls					Mile	\$	5,907,456	\$	-
19 Single Track Cut and Cover Subway					Mile	\$	131,246,080	\$	-
Four Track Drill & Blast					Mile	\$	293,775,360	\$	-
Four Track Mined (Soft Soil)					Mile	\$	158,400,000	\$	-
Four Track TBM (<6 Miles)					Mile	\$	213,274,624		
Four Track TBM w/3rd Tube (>6 Miles)					Mile	\$	353,441,792		
Four Track Cut & Cover Tunnel					Mile	\$	262,492,160	0.00 \$	-
Double Deck with Double Track Cut and Cover Box					Mile	\$	328,521,114		
Grade Separations									
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)					ea	\$	13,284,352	\$	-



COST ELEMENTS		UNIT	UNIT PRICE	Elevated Viaduct (2 tracks)			
Subsection 9 (a)			Base: 2009 (3rd Quarter)	B			
				Start: 2760 + 00	End: 2808 + 00	0.91 Miles	
Subsection Details						Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 2760 + 00	End: 2808 + 00	0.91 Miles	
Double Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
	Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$ 19,926,528				\$ -
2	Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$ 2,759,680				\$ -
3	Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$ 2,029,568				\$ -
4	Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 3,563,520				\$ -
5	Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$ 3,593,216				\$ -
	Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$ 2,850,816				\$ -
6	Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$ 3,171,328				\$ -
7	Street Bridging HSR Trench	ea	\$ 1,398,784				\$ -
8	Minor Crossing Closures	ea	\$ 87,040				\$ -
Building Items							
1	Intermediate Passenger Stations	Each	\$ -				\$ -
	Intermediate Passenger Stations (Diridon)	Each	\$ 119,521,386			1	\$ 119,521,386
2	Terminal Passenger Stations	Each	\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000			0	\$ -
	Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Trench	Each	\$15,000,000				\$ -
3	Maintenance Facility	Each	\$ 123,921,884				\$ -
4	Parking - Structures	space	-				\$ -
5	Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation							
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -
3	Single Track Removal	Mile	\$ 130,048				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
ROW (Not Included)							
ROW required for each segment							
1	Dense Urban	Acre	\$ 2,786,321				\$ -
2	Urban	Acre	\$ 1,371,510				\$ -
3	Dense Suburban	Acre	\$ 908,134				\$ -
4	Suburban	Acre	\$ 208,418				\$ -
5	Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement							
1	Dense Urban	Acre					\$ -
2	Urban	Acre					\$ -
3	Dense Suburban	Acre					\$ -
4	Suburban	Acre					\$ -
5	Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities							
6	Dense Urban	Acre	\$ 2,786,321				\$ -
7	Urban	Acre	\$ 1,371,510				\$ -
8	Dense Suburban	Acre	\$ 908,134				\$ -
9	Suburban	Acre	\$ 208,418				\$ -
10	Undeveloped	Acre	\$ 3,642				\$ -
	Environmental Mitigation = 3% Line Costs						\$ 4,669,707
System Elements							
1	Signaling (ATC)	Mile	\$ 2,070,000			0.91	\$ 1,881,818
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			0.91	\$ 490,909
3	Wayside Protection System	Mile	\$ 108,000				
Electrification Items						0.91	\$ -
1	Traction Power supply	Mile	\$ 1,170,000			0.91	\$ 1,063,636
2	Traction Power Distribution	Mile	\$ 1,485,000			0.91	\$ 1,350,000
	Subtotal						\$ 165,112,978
	Program Implementation Costs (per screening)						\$ 42,103,809
	Program Implementation Costs						
	Contingencies (per screening) (25%)						\$ 41,278,245
	Subtotal						\$ 248,495,032
	Subtotal (Rounded)						\$ 248,000,000



Subsection 9(b)	9(b)A (2.3 miles)	9(b)B (0.9 miles)
	Deep Tunnel (HST Only)	Deep Tunnel (HST Only)
Capital Cost (\$2009 in Millions) does not include ROW	\$483 (2 tracks)	\$382 (2 tracks)
Acquisition Cost of Permanent ROW	Lowest	Lowest
Notes:	1. Option only applies to West Alignment.	1. HST San Jose station. 2. Option only applies to West Alignment.



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks) (HST only)			
Subsection 9(b)			Base: 2009 (3rd Quarter)		A			
					Start: 2640 + 00	End: 2760 + 00	2.27 Miles	
Subsection Dedtails							Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 2640 + 00	End: 2760 + 00	2.27 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total								
1 Double Track Section - At Grade	Mile	\$	2,100,224				0.00	\$ -
2 Double Track Section - On Structure	Mile	\$	4,700,160				0.00	\$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				2.27	\$ 10,682,182
4 Double Track Section - In Trench	Mile	\$	4,700,160				0.00	\$ -
Four Track Section - Total								
Four-track Section - At Grade	Mile	\$	4,200,448				0.00	\$ -
Four-Track Section - On Structure	Mile	\$	9,400,320				0.00	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0.00	\$ -
Four-Track Section - In Trench	Mile	\$	9,400,320				0.00	\$ -
Single Track - Total								
5 Single Track Section - At Grade	Mile	\$	1,549,312				0	\$ -
6 Single Track Section - On structure	Mile	\$	2,350,080				0	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0	\$ -
8 Single Track Section - In Trench	Mile	\$	2,350,080				0	\$ -
9 Freight Double Track - At Grade	Mile	\$	2,839,552				0	\$ -
10 Freight Single Track - At Grade	Mile	\$	1,549,312				0	\$ -
Earthwork Items								
1 Site Preparation - Undeveloped	Acre	\$	9,216				0.00	\$ -
2 Total Cut	CY	\$	6.45				977777.78	\$ 6,307,840
3 Total Fill	CY	\$	6.29				0.00	\$ -
4 Borrow	CY	\$	12.58				0.00	\$ -
5 Spoil	CY	\$	12.58				977777.78	\$ 12,300,288
6 Landscape erosion Control	Acre	\$	6,144				0.00	\$ -
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.00	\$ -
8 Special Drainage Facilities	5% Earthwork							\$ 930,406
Structures, Tunnels, Walls								
1 Standard Structure (2 tracks)	Mile	\$	34,972,672				0.00 Miles	\$ -
Standard Structure (4 tracks)	Mile	\$	52,459,008				0.00 Miles	
2 High Structure	Mile	\$	40,424,448					\$ -
3 Long Span Structure	Mile	\$	61,919,232					\$ -
4 Waterway Crossing - Primary	Mile	\$	85,342,208					\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408					\$ -
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264					\$ -
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				2.27 Miles	\$ 242,357,527
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896					\$ -
9 Double Track Drill & Blast	Mile	\$	146,887,680					\$ -
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000				0.00	\$ -
Double Track TBM (<6 Miles)	Mile	\$	106,637,312					\$ -
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896					\$ -
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952					\$ -
12 Crossovers	ea	\$	442,368					\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080					\$ -
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224				0.00	\$ -
Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336				0.00	
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904					\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856					
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				2.27	\$ 26,928,873
17 Retaining Walls	Mile	\$	8,613,888				0.00	\$ -
18 Containment Walls	Mile	\$	5,907,456					\$ -
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080					\$ -
Four Track Drill & Blast	Mile	\$	293,775,360					\$ -
Four Track Mined (Soft Soil)	Mile	\$	158,400,000				0.00	\$ -
Four Track TBM (<6 Miles)	Mile	\$	213,274,624				0.00	\$ -
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792					\$ -
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00	\$ -
Grade Separations								
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352					\$ -
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528					\$ -
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680					\$ -
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568					\$ -
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520				0	\$ -
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216					\$ -
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816					\$ -
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328					\$ -
7 Street Bridging HSR Trench	ea	\$	1,398,784					\$ -



COST ELEMENTS		UNIT	UNIT PRICE	Tunnel (2 tracks) (HST only)			
Subsection 9(b)			Base: 2009 (3rd Quarter)	A			
				Start: 2640 + 00	End: 2760 + 00	2.27 Miles	
Subsection Dedtails						Quant.	Cost
Double Track At-Grade (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)				Start: 2640 + 00	End: 2760 + 00	2.27 Miles	
Double Track Trench (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)				Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)				Start: 0 + 00	End: 0 + 00	0.00 Miles	
8	Minor Crossing Closures	ea	\$ 87,040				\$ -
Building Items							
1	Intermediate Passenger Stations	Each	\$ -				\$ -
2	Terminal Passenger Stations	Each	\$ -				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - On Structure	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$15,000,000				\$ -
	Caltrain Passenger Station - In Trench	Each	\$15,000,000			0	\$ -
3	Maintenance Facility	Each	\$ 123,921,884				\$ -
4	Parking - Structures	space	\$ -				\$ -
5	Parking - At Grade	space	\$ -				\$ -
Rail & Utility Relocation							
1	Single Track Relocation (Temporary)	Mile	\$ 2,000,896				\$ -
2	Single Track Relocation (Permanent)	Mile	\$ 2,000,896				\$ -
3	Single Track Removal	Mile	\$ 130,048				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$ 1,548,288				\$ -
5	Major Utility Relocations - Urban	Mile	\$ 1,084,416				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$ 775,168				\$ -
7	Major Utility Relocations - Suburban	Mile	\$ 464,896				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$ 30,720				\$ -
ROW (Not Included)							
ROW required for each segment							
1	Dense Urban	Acre	\$ 2,786,321				\$ -
2	Urban	Acre	\$ 1,371,510				\$ -
3	Dense Suburban	Acre	\$ 908,134				\$ -
4	Suburban	Acre	\$ 208,418				\$ -
5	Undeveloped	Acre	\$ 3,642				\$ -
ROW required for Temp. Construction Easement							
1	Dense Urban	Acre					\$ -
2	Urban	Acre					\$ -
3	Dense Suburban	Acre					\$ -
4	Suburban	Acre					\$ -
5	Undeveloped	Acre					\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities							
6	Dense Urban	Acre	\$ 2,786,321				\$ -
7	Urban	Acre	\$ 1,371,510				\$ -
8	Dense Suburban	Acre	\$ 908,134				\$ -
9	Suburban	Acre	\$ 208,418				\$ -
10	Undeveloped	Acre	\$ 3,642				\$ -
Environmental Mitigation = 3% Line Costs							\$ 8,985,213
System Elements							
1	Signaling (ATC)	Mile	\$ 2,070,000			2.27	\$ 4,704,545
2	Communications (w/ Fiber Optic Backbone)	Mile	\$ 540,000			2.27	\$ 1,227,273
3	Wayside Protection System	Mile	\$ 108,000			2.27	\$ 245,455
Electrification Items							
1	Traction Power supply	Mile	\$ 1,170,000			2.27	\$ 2,659,091
2	Traction Power Distribution	Mile	\$ 1,485,000			2.27	\$ 3,375,000
Subtotal							\$ 320,703,693
Program Implementation Costs (per screening)							\$ 81,779,442
Program Implementation Costs							
Contingencies (per screening) (25%)							\$ 80,175,923
Subtotal							\$ 482,659,058
Subtotal (Rounded)							\$ 483,000,000



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks) (HST only)			
Subsection 9(b)			Base: 2009 (3rd Quarter)		B			
					Start: 2760 + 00	End: 2809 + 00	0.93 Miles	
Subsection Dedtails							Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 2760 + 00	End: 2809 + 00	0.93 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Section - Total								
1 Double Track Section - At Grade	Mile	\$	2,100,224				0.00	\$ -
2 Double Track Section - On Structure	Mile	\$	4,700,160				0.00	\$ -
3 Double Track Section - In Tunnel or Subway	Mile	\$	4,700,160				0.93	\$ 4,361,891
4 Double Track Section - In Trench	Mile	\$	4,700,160				0.00	\$ -
Four Track Section - Total								
Four-track Section - At Grade	Mile	\$	4,200,448				0.00	\$ -
Four-Track Section - On Structure	Mile	\$	9,400,320				0.00	\$ -
Four-Track Section - In Tunnel or Subway	Mile	\$	9,400,320				0.00	\$ -
Four-Track Section - In Trench	Mile	\$	9,400,320				0.00	\$ -
Single Track - Total								
5 Single Track Section - At Grade	Mile	\$	1,549,312				0	\$ -
6 Single Track Section - On structure	Mile	\$	2,350,080				0	\$ -
7 Single Track Section - In Tunnel or Subway	Mile	\$	2,350,080				0	\$ -
8 Single Track Section - In Trench	Mile	\$	2,350,080				0	\$ -
9 Freight Double Track - At Grade	Mile	\$	2,839,552				0	\$ -
10 Freight Single Track - At Grade	Mile	\$	1,549,312				0	\$ -
Earthwork Items								
1 Site Preparation - Undeveloped	Acre	\$	9,216				0.00	\$ -
2 Total Cut	CY	\$	6.45				399259.26	\$ 2,575,701
3 Total Fill	CY	\$	6.29				0.00	\$ -
4 Borrow	CY	\$	12.58				0.00	\$ -
5 Spoil	CY	\$	12.58				399259.26	\$ 5,022,618
6 Landscape erosion Control	Acre	\$	6,144				0.00	\$ -
7 Security Fencing (Both sides of ROW)	Mile	\$	144,384				0.00	\$ -
8 Special Drainage Facilities	5% Earthwork							\$ 379,916
Structures, Tunnels, Walls								
1 Standard Structure (2 tracks)	Mile	\$	34,972,672				0.00 Miles	\$ -
Standard Structure (4 tracks)	Mile	\$	52,459,008				0.00 Miles	
2 High Structure	Mile	\$	40,424,448					\$ -
3 Long Span Structure	Mile	\$	61,919,232					\$ -
4 Waterway Crossing - Primary	Mile	\$	85,342,208					\$ -
5 Waterway Crossing - Secondary (Irrigation Canal)	Mile	\$	92,049,408					\$ -
6 Twin Single Track Drill&Blast (<6 Miles)	Mile	\$	142,731,264					\$ -
7 Twin Single Track TBM (<6 Miles)	Mile	\$	106,637,312				0.93 Miles	\$ 98,962,657
8 Twin Single Track TBM w/3rd Tube (<6 Miles)	Mile	\$	176,720,896					\$ -
9 Double Track Drill & Blast	Mile	\$	146,887,680					\$ -
10 Double Track Mined (Soft Soil)	Mile	\$	79,200,000				0.00	\$ -
Double Track TBM (<6 Miles)	Mile	\$	106,637,312					\$ -
Double Track TBM w/3rd Tube (>6 Miles)	Mile	\$	176,720,896					\$ -
11 Seismic Chamber (Drill & Blast/Mined)	ea	\$	126,205,952					\$ -
12 Crossovers	ea	\$	442,368					\$ -
13 Cut & Cover Double Track Tunnel	Mile	\$	131,246,080					\$ -
14 Trench Long (2 tracks) (1000 ft+)	Mile	\$	57,524,224				0.00	\$ -
Trench Long (4 tracks) (1000 ft+)	Mile	\$	86,286,336				0.00	
15 Trench Short (2 tracks) (<1000 ft)	Mile	\$	78,843,904					\$ -
Trench Short (4 tracks) (<1000 ft)	Mile	\$	118,265,856					
16 Mechanical & Electrical for Tunnels	Mile	\$	11,848,704				0.93	\$ 10,995,956
17 Retaining Walls	Mile	\$	8,613,888				0.00	\$ -
18 Containment Walls	Mile	\$	5,907,456					\$ -
19 Single Track Cut and Cover Subway	Mile	\$	131,246,080					\$ -
Four Track Drill & Blast	Mile	\$	293,775,360					\$ -
Four Track Mined (Soft Soil)	Mile	\$	158,400,000					\$ -
Four Track TBM (<6 Miles)	Mile	\$	213,274,624					\$ -
Four Track TBM w/3rd Tube (>6 Miles)	Mile	\$	353,441,792					\$ -
Four Track Cut & Cover Tunnel	Mile	\$	262,492,160				0.00	\$ -
Grade Separations								
1 Roadway Crossing HSR - 4 Lane Roadway Under 2 Tracks (Urban)	ea	\$	13,284,352					\$ -
Roadway Crossing HSR - 4 Lane Roadway Under 4 Tracks (Urban)	ea	\$	19,926,528					\$ -
2 Roadway Crossing HSR - 2 Lane Roadway Under 4 Tracks (Suburban)	ea	\$	2,759,680					\$ -
3 Roadway Crossing HSR - 2 Lane Roadway Under 2 Tracks (Undeveloped)	ea	\$	2,029,568					\$ -
4 Roadway Crossing HSR - 4 Lane Roadway Over 4 Tracks (Urban)	ea	\$	3,563,520					\$ -
5 Roadway Crossing HSR - 4 Lane Roadway Over 2 Tracks (Suburban)	ea	\$	3,593,216					\$ -
Roadway Crossing HSR - 2 Lane Roadway Over 4 Tracks (Urban)	ea	\$	2,850,816					\$ -
6 Roadway Crossing HSR - 2 Lane Roadway Over 2 Tracks (Undeveloped)	ea	\$	3,171,328					\$ -
7 Street Bridging HSR Trench	ea	\$	1,398,784					\$ -



COST ELEMENTS			UNIT	UNIT PRICE	Tunnel (2 tracks) (HST only)			
Subsection 9(b)				Base: 2009 (3rd Quarter)	B			
					Start: 2760 + 00	End: 2809 + 00	0.93 Miles	
Subsection Dedtails							Quant.	Cost
Double Track At-Grade (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Double Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Double Track Tunnel (Mile)					Start: 2760 + 00	End: 2809 + 00	0.93 Miles	
Double Track Trench (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Construction/Reconstruction At-Grade (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Elevated (Mile)					Start: 0 + 00		0.00 Miles	
Four Track Tunnel (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
Four Track Trench (Mile)					Start: 0 + 00	End: 0 + 00	0.00 Miles	
8	Minor Crossing Closures	ea	\$	87,040				\$ -
<b>Building Items</b>								
1	Intermediate Passenger Stations	Each	\$	-				\$ -
	Intermediate Passenger Stations (Diridon)	Each	\$	119,521,386			1	\$ 119,521,386
2	Terminal Passenger Stations	Each	\$	-				\$ -
	Caltrain Passenger Station - At-Grade	Each	\$	15,000,000				\$ -
	Caltrain Passenger Station - On Structure	Each	\$	15,000,000				\$ -
	Caltrain Passenger Station - In Tunnel or Subway	Each	\$	15,000,000				\$ -
	Caltrain Passenger Station - In Trench	Each	\$	15,000,000			0	\$ -
3	Maintenance Facility	Each	\$	123,921,884				\$ -
4	Parking - Structures	space	\$	-				\$ -
5	Parking - At Grade	space	\$	-				\$ -
<b>Rail &amp; Utility Relocation</b>								
1	Single Track Relocation (Temporary)	Mile	\$	2,000,896				\$ -
2	Single Track Relocation (Permanent)	Mile	\$	2,000,896				\$ -
3	Single Track Removal	Mile	\$	130,048				\$ -
4	Major Utility Relocations - Dense Urban	Mile	\$	1,548,288				\$ -
5	Major Utility Relocations - Urban	Mile	\$	1,084,416				\$ -
6	Major Utility Relocations - Dense Suburban	Mile	\$	775,168				\$ -
7	Major Utility Relocations - Suburban	Mile	\$	464,896				\$ -
8	Major Utility Relocations - Undeveloped	Mile	\$	30,720				\$ -
<b>ROW (Not Included)</b>								
ROW required for each segment								
1	Dense Urban	Acre	\$	2,786,321				\$ -
2	Urban	Acre	\$	1,371,510				\$ -
3	Dense Suburban	Acre	\$	908,134				\$ -
4	Suburban	Acre	\$	208,418				\$ -
5	Undeveloped	Acre	\$	3,642				\$ -
ROW required for Temp. Construction Easement								
1	Dense Urban	Acre						\$ -
2	Urban	Acre						\$ -
3	Dense Suburban	Acre						\$ -
4	Suburban	Acre						\$ -
5	Undeveloped	Acre						\$ -
Right-of-Way Required for Stations, Maintenance & Parking Facilities								
6	Dense Urban	Acre	\$	2,786,321				\$ -
7	Urban	Acre	\$	1,371,510				\$ -
8	Dense Suburban	Acre	\$	908,134				\$ -
9	Suburban	Acre	\$	208,418				\$ -
10	Undeveloped	Acre	\$	3,642				\$ -
Environmental Mitigation = 3% Line Costs								\$ 7,254,604
<b>System Elements</b>								
1	Signaling (ATC)	Mile	\$	2,070,000			0.93	\$ 1,921,023
2	Communications (w/ Fiber Optic Backbone)	Mile	\$	540,000			0.93	\$ 501,136
3	Wayside Protection System	Mile	\$	108,000			0.93	\$ 100,227
<b>Electrification Items</b>								
1	Traction Power supply	Mile	\$	1,170,000			0.93	\$ 1,085,795
2	Traction Power Distribution	Mile	\$	1,485,000			0.93	\$ 1,378,125
<b>Subtotal</b>								\$ 254,061,036
Program Implementation Costs (per screening)								\$ 64,785,564